

VOL. LXXXIV No. 2161

[Registered at the G.P.O.  
as a newspaper]

LONDON, OCTOBER 15, 1960

PRICE ONE SHILLING

## Enter Logistics

**M**OST of us are acquainted with the concept of logistics—"the science of moving and supplying armies" is how one dictionary puts it—but have not seriously entertained its relevance to hum-drum industrial distribution. After all, military transport strategists can afford to ignore the small item of cost. How wrong we are was implicit in the message conveyed by the president of an American freightcar supply organisation (an Army general, be it noted) to a conference of the Railway Systems and Procedures Association. Unless, he declared, American railroads ceased to be merely suppliers of transport and embraced logistics as a marketing technique they would be left out in the cold. The growth of private transport was a manifestation of their shortcomings and could only be reversed by re-orientation of perspectives by public carriers. Logistics he defined as the "all-embracing concept of materials management based on lowest landed cost." Mark well these last three words. Logistics has shed its uniform and is moving on the civilian front. Much of the conference discussion exposed the dilemma in which these opening remarks had left the delegates. Should the railroads, by co-ordination of services and equipment, endeavour to extend themselves to the user as a comprehensive distribution service? One speaker, credited with much of the pioneer work on trailer-on-flatcar service, put the opposing view. Whenever a railroad departed from simple trunk hauling to provide collection and delivery, terminal or other facilities it entered a high-cost, specialised realm which could destroy the economies made possible by high utilisation, which was the basis of "piggyback" operation. If the railroads would allow this factor to influence their development of container or trailer-on-flatcar service it could not but result in an even faster rate of growth for that traffic, he thought. It is interesting to ponder whether the same should not hold good of British Railways.

## A Timely Stocktaking

**A** FORTIETH anniversary affords fitting opportunity to pause and take stock, and Mr. K. W. C. Grand's presidential address last Monday to the Institute of Transport should fulfil its purpose of inspiring members to turn from the art of transport, to which they have contributed so much, to a study of its science. After all, the Institute was founded to provide a medium for a study of the science and art of transport in all its branches, and whilst the "art" side has been covered by the accumulation of a mass of authoritative information on the developments and practices of all the means of transport, precious little has been done in the realms of applied science. This, Mr. Grand aptly defines as "an analysis of all forms of transport to determine how each form may best be used, separately and in combination, in the interest of the public and the nation." By drawing attention to this lack the new president is giving powerful support to those who, like Sir Lynden Macassey, Q.C., a distinguished past-president, have evinced the need for framing "generalisations" common to all transport media. He is also reiterating the views of the late Sir George Gibb in a letter published in this newspaper over 40 years ago along with others advocating the formation of the Institute. In this the one-time general manager of the North Eastern Railway suggested that its main object should be "by collective and organised effort to widen the boundaries of knowledge in the sphere of transport and to extend the application of the methods of science." It is high time indeed that the Government interested itself in the significance and implications of the various methods of transport, and in stressing the need for much greater support and encouragement from the leaders of the industry for the Institute, under whose aegis the subject can be tackled, Mr. Grand is performing a service to it and the community in general. He is quite right when he says that a membership of 10,000 is not high enough for so extensive and important an industry as transport.

## Transport and Labour

**O**N the last day of this year's tempestuous conference of the Labour Party time was found for the consideration of a composite resolution on transport, which was duly carried. In moving it Mr. George Lindgren (Transport Salaried Staffs Association), a member of the last Labour Government, stressed the continued interference of the Government in the management of the B.T.C., and said that the Stedeford committee, which presaged further interference, was the most curious he had given evidence before. Replying for the executive, Mr. R. Gunter, president of the T.S.S.A., remarked: "There has never been an industry that has been so organised, reorganised, disorganised,

Alexander of Tunis, K.G., stressed that whilst the present expansion would increase output from 50,000 to 75,000 tons per annum, it would also cater for the demand that had developed for the stronger magnesium alloys, and for plate of sufficient size to satisfy the needs of the shipbuilding, chemical and railway industries. In shipbuilding, particularly, there is a big demand for wider plate than the existing 96-in. hot mill could produce, and this was the main reason for the installation of the new mill which can roll plate to a maximum width of 134 in. and up to 50 ft. in length. Another big market for aluminium plate is the aircraft industry where high-strength alloys of a thickness of several inches are used for machining into components.

# CURRENT TOPICS

## LEADING FEATURES IN THIS ISSUE

Portrait	PAGE		PAGE
Professor E. R. Hondelink, M.I.C.E., M.Inst.T. . . . .	11	From Brewery to Silo . . . . .	16
<b>Special Articles</b>		R.H.A. Conference: Good House-keeping Resolutions . . . . .	17
Brilliantly Organised Conference . . . . .	2	<b>Modern Airways Section</b>	
New Designs at the Paris Show . . . . .	3	British Air Services: Twelfth Report of A.T.A.C. . . . .	7
The Science of Transport: Scope for Much Research. By K. W. C. Grand . . . . .	5	<b>Regular Features</b>	
Abandonment of Tramways: Complete Systems Replaced by Bus and Trolleybus (Cont.) . . . . .	6	Commercial Aviation . . . . .	11
Accidents on British Railways: Greater Safety from Modernisation . . . . .	9	Financial Results . . . . .	20
Last Journeys of Sheffield Trams . . . . .	11	Forthcoming Events . . . . .	18
Electrification Conference: Valuable Exchanges of Ideas . . . . .	13	Important Contracts . . . . .	20
Blackpool Anniversary: 75 Years of Tramway Operation . . . . .	14	Letters to the Editor . . . . .	18
Promotional Semi-Trailer for Reed Paper Group . . . . .	15	Lorry, Bus and Coach News . . . . .	4
		News From All Quarters . . . . .	10
		News Summary . . . . .	2
		Shipping and Shipbuilding . . . . .	20
		Social and Personal . . . . .	19

centralised, decentralised, evolved and devolved as the railway industry." It was a tragedy, he said, that for 40 years the politicians had failed to face up to the fundamental problem of transport. The Tory Party and the present Minister would not see transport as a whole and so plan and control it that it could best serve the interests of all other industries. Neither would the Prime Minister face the problem of whether one was to run the railways as a public service, a semi-public service or purely on the basis of commercial interest. He (the speaker) believed it was impossible to conceive of the railways being run absolutely on a commercial basis. The welfare and well-being of 600,000 families was involved in the matter, and they were not prepared to see this industry again mangled. The Parliamentary Labour Party would fight the issue. It is true that no British Government has so far faced the necessity for a thorough investigation to decide how transport as a whole can best be deployed in the national interest. For years we have been stressing this need. As Mr. Grand pointed out in his presidential address to the Institute of Transport, if transport is allowed to grow unchecked by scientific analysis its real cost must in due course become a formidable proportion of the entire cost of living—and this apart from the probability of near chaos on roads and city streets.

## Aluminium in Industry

**C**ONVINCING proof of the expanding use of aluminium in industry was effectively demonstrated on Thursday, October 6, when Alcan Industries, Limited, invited some five hundred guests to a reception held at Rogerstone Works, Monmouthshire, to mark the completion of a 144-in. rolling mill—main feature of a £10 million scheme for enlarging and improving the existing continuous strip mill which has been in use since 1950. Speaking at the reception, the group's chairman, Field Marshal Earl

There is also an increasing tendency for aluminium to be employed in road and rail vehicles, where its lightness and durability offer important advantages by improving power to weight ratios and reducing operating and maintenance costs. Similarly it is an ideal material for containers, and has, on account of its good conductivity, weight and relative cheapness, an assured future in the development of the electrical industry. With such excellent prospects it is not surprising that provision has been made in the design layout of the Rogerstone works for a further expansion that will ultimately raise production to 175,000 tons a year.

## Traffic Problem More Urgent

**T**RAFFIC increased at an average rate of 7 per cent between 1951 and 1958, while last year it went up by 12 per cent; if this continues the national estimates of future road traffic will need drastic upward revision, according to the Road Research Board in its report for 1959 (*Road Research 1959*. Published by D.S.I.R. by H.M.S.O., price 7s. net.), which comments: "The problem of coping with existing traffic and providing for its future increase, therefore, threatens to become even more urgent than we foresaw in 1954." The board welcomed the important work of the Road Research Laboratory in observations of the M1 motorway, results of which were expected to provide a valuable guide in the planning of a national programme; problems recommended for study included the effect of lighting on accident rates and trials of anti-dazzle fences. Acknowledging the obvious difficulties to be faced in urban areas, the report said that the contribution possible from motorways deserved serious study in relation to the traffic for which provision had to be made now and in the future. The report of the Director of Road Research, Sir William Glanville, indicated that a study of London traffic showed a rate of growth greater at night than during the day. From 1953 to

1958 traffic between 9 a.m. and 5 p.m. rose by 28 per cent but traffic between 1 a.m. and 6 a.m. increased by 100 per cent. The eighth London traffic survey, covering about 40 miles in Central London, was made in the autumn of 1958. It showed that the number of commercial vehicles was still increasing slowly, that the numbers of buses and taxis had continued downwards and that private vehicles had increased more rapidly, until in 1958 they represented the largest single class of traffic. The average journey time, under peak-hour conditions, was 7.3 minutes per mile, of which 3.3 (or 45 per cent) was spent waiting or queuing at controlled intersections. An analysis of data collected in a survey of travel in Greater London showed that in a normal week 60 per cent of road travel was in buses, 22 per cent in private cars, 10 per cent by bicycle and the remaining 8 per cent by coach, taxi or motorcycle. About 50 per cent of travel on weekdays took place between 7 and 9 a.m. or between 5 and 7 p.m. Parking meters in Mayfair had helped to increase average traffic speed by 9 per cent, but in the surrounding West End zones it decreased by between 7 and 13 per cent. Another study, in Glasgow, had shown that the introduction of no waiting signs in the central area, despite an increase of 5 per cent in traffic flow, had raised average journey speed by 12 per cent. The greatest effect was at intersections, delays being reduced by 23 per cent.

## Road Construction and Maintenance

**I**NVESTIGATIONS into methods of designing the structure of a road with regard both to the sub-soil and the traffic continued to occupy an important place in the research programme and the solutions of many of the problems involved were being sought largely through full-scale experiments on heavily trafficked roads. Experimental work to improve the riding quality of concrete roads had continued. Finishing machines, modified so that the finishing screed was supported between two bogies instead of resting directly on the forms or rails as at present, were used on a number of sites during the year and were found to produce more uniform road surfaces. Tests with models carried out with two common types of snow plough, the vee plough and the single-blade plough, sought improved methods of dealing with snow and ice. With the vee plough tests were made to determine the best shape of blade for ploughing snow up to 6 in. deep on motorways at speeds up to 30 m.p.h. With the single-blade plough the performance was considerably improved if the angle to the direction of travel was reduced from about 60 to 45 deg., with adjustment of blade length to clear the same width of track. Probing the methods of electrical heating on roads to prevent the formation of ice and frost had led to some interesting developments. A full-scale experimental road-heating system, 750 yd. long, had been built into the nearside lanes of the A412 at Uxbridge Road, Slough, to determine which cables gave best results.

## B.T.C. Advertising Filmstrip

**A**N attractive 10-minute filmstrip, *Let's Look at British Transport Advertising* has been produced for the Commercial Advertising Service of the British Transport Commission. Made in full colour, the filmstrip presents the great variety of British Transport advertising sites, ranging from an 11 inch by 14 inch bus panel to the large three-dimensional illuminated signs at such London Transport stations as Piccadilly Circus and the railway stations on the main lines of British Railways. Attention is drawn to the vast audience for posters on British Transport sites, many of whom look at the display, of necessity, for a considerable period, when in trains and buses. Maps are used to emphasise the use which local, regional and national advertisers can make of the sites. The economical rentals are illustrated pictorially. Produced by British Transport Films under the direction of Edgar Anstey, the filmstrip will be shown to advertisers and advertising agents throughout the country and can be accompanied by a tape recorder commentary.



## OFFICIAL NOTICE

COUNTY BOROUGH OF WALSALL

TRANSPORT DEPARTMENT

APPOINTMENT OF DEPUTY MANAGER

APPLICATIONS are invited for this post from suitably qualified persons with experience of the management of a large passenger transport undertaking, at a salary in accordance with Scale "B" of the scales adopted by the Joint Negotiating Committee for Chief Officers of Local Authorities.

Housing accommodation will not be provided and the appointment will be subject to a satisfactory medical examination and to the Local Government Superannuation Acts.

Applications, stating age, qualifications, present appointment, salary and previous experience, with a summary of the particulars of the Undertaking at present served, including type of services provided, size of fleet, annual traffic revenue and route-mileage operated, together with the names of two referees and endorsed "Appointment of Deputy Manager, Transport Department," must be received by me not later than October 24, 1960.

Applicants must disclose whether they are related to any member or officer of the Council. Canvassing in any form will disqualify.

R. EDGLEY COX, M.Sc.  
General Manager and Engineer.

Transport Department Offices,  
St. Paul's Street, Walsall.

**Follain-Wycliffe**  
FOUNDRIES LTD.

**SPECIALIST PRODUCTS IN "CY" REGD.**

**ABRASION-RESISTING ALLOY**

**LOCO BRAKE BLOCK LIFE**  
extended from 3 months to 2½ years

This is typical of the extra service being obtained from our CY Alloy Brake Blocks— which, although remarkably resistant to wear, have no adverse effect on loco tyres. This is one of our most popular applications. After exhaustive tests many of the best known manufacturers of locomotives fit CY brake blocks as standard.

**FOLLAIN-WYCLIFFE FOUNDRIES LTD.**  
LUTTERWORTH • Near RUGBY  
Tel.: Lutterworth 10, 60 & 152  
Grams: "Wycliffe," Lutterworth



Published Every Friday

RUSSELL COURT, 3-16 WOBURN PLACE,  
LONDON, W.C.1

Telephone Number: TERephone 0303 (3 lines)  
Telegraphic Address: Transpohen, Westcent, London

ANNUAL SUBSCRIPTIONS  
BRITISH ISLES, 47/6; CANADA, 45/-;  
ELSEWHERE ABROAD, 47/6  
payable in advance and postage free

*The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements. In controversial subjects relating to all aspects of transport and traffic this newspaper offers a platform for independent comment and debate, its object being to encourage the provision of all forms of transport in the best interests of the community.*

We desire to call the attention of our readers to the fact that Russell Court, 3-16 Woburn Place, London, W.C.1, is our sole London address, and that no connection exists between this newspaper and any other publications bearing somewhat similar titles.

### Brilliantly Organised Conference

IN the magnificent setting of London's Guildhall the dinner given to the delegates to the British Railways Electrification Conference by the electrical and locomotive industries made a fitting end to a memorable week, graced as it was by the Lord Mayor of London, Sir Edmund Stockdale, his sheriffs, and by the President of the Board of Trade, Mr. Reginald Maudling. The theme of the occasion was the international co-operation which is so pre-eminently exemplified by the interchange of ideas between railway administrations and it served also to underscore what the participants in the week's proceedings could not have failed to notice—the dense traffic with which railways in Britain have to cope and the ingenuity with which railway engineers and the British equipment manufacturers have joined hands in overcoming the complex difficulties arising from our special traffic problems in Britain and the fact that our railways, the world's pioneer systems, have a restricted loading gauge which makes electrification, although not less rewarding, a more complicated task. To win praise from overseas exponents of electrification in these matters is to earn praise indeed. There can, however, be no doubt of the respect given by delegates from Continental undertakings for our progress in the physical business of electrifying at such a rate that 400 multiple-unit sets come into service within a few months of one another, for the developments we have made in the application of semiconductor rectifiers to traction purposes and, to give one more instance, in the establishment of system tests on a scientific basis.

### System Tests

HITHERTO most tests of traction systems have been of a piecemeal character relying on numerous assumptions which were not always appreciated. Often maximum conditions were stipulated which were entirely artificial and did not represent the position correctly. It is a matter of history that much harm has been done by such misleading information and progress has consequently been arrested thereby. In the case of the introduction of 50-cycle traction in the usual atmosphere of doubt as to certain consequences which could not be precisely predicted, the new testing techniques have been called into service. It is no less than a mammoth computing exercise—not in one place, but in

many both fixed and mobile. Information from all sources of interest will be simultaneously recorded and synchronised by electric recorders which are capable of sampling up to 12 different electrical inputs every two seconds. The values are produced in the international teleprinter code as punched tapes. While these recorders can only accept inputs as d.c. voltages they can be used in association with translators where the values originate in other forms, e.g. movement of vehicles and overhead equipment. Thus information under all conditions of service is recorded throughout the system, including the interaction of the pantograph and the overhead catenary, spring deflections, etc. In the signalling and telecommunication circuits, interference effects are being measured whilst other instruments display the fundamental and 11 selected odd harmonics of the wave forms submitted to it.

### Research in Electric Traction

THE ever quickening march of science has demanded an ever increasing expansion in research. The demands in all fields have been considerable and so far the effort in the traction field has not been commensurate with its importance to the community or potential value, insofar as this country is concerned. The modernisation plan has provided the opportunity for reviewing and expanding the research programme, which has provided for a special research branch in the electric traction field. The large capital investment required justifies every means by which the performance can be improved concurrently with a reduction in cost, and the opportunity has been provided by the adoption of the 25 kV 50-cycle system. Already tangible results are forthcoming following the increased research interest that has been directed to the many fundamental matters which, but for this major decision, would not have been studied. The establishment of a readership in electric traction at London University is a step of incalculable importance. Whatever the outcome of these researches, the a.c. overhead system cannot help but benefit more than most. Thus so long as railways continue to be one of the largest users of single-phase power they have a responsibility in fostering the developments which must inevitably take place.

### Where Now?

GUESTS of the British Transport Commission, of L.A.M.A. and of B.E.A.M.A. were unanimous in praising the brilliant organisation of the conference, the technical visits, the exhibition at Battersea Wharf and, not least, the social functions. It became obvious to them that if, for one reason or another, we have made a late start on railway modernisation (and our European friends are the first to recognise our preoccupation with certain other affairs after 1939), we have great experience to draw on in 77 years of minor railway operation and 56 of main-line conversions; they agree that we can now offer equipment which will stand comparison with anything the world has to offer. Knowing that on their own systems they can obtain reductions in cost per train-mile of the order of one-third by electrification, they will be astonished if we do not pursue our advantage at home with an even larger programme of main-line conversion than we have so far (publicly, at least) envisaged. In this connection it was reassuring to hear Sir Philip Warter, chairman of the Southern Area Board, declare on Monday of this week, at the opening of the Hither Green Continental perishable traffic depot, that the Southern was determined, after completing its Kent scheme, to electrify the main line from Waterloo to Salisbury and also to Southampton, Bournemouth and Weymouth and to abolish steam traction east of Salisbury so as to reap the greatest possible economy. As we have pointed out, the 25-kV 50-cycle system, taking current from the national grid, offers opportunity for great economy in working on busy routes and if our railways are to prosper we should embrace it as far as possible while turning over routes of lighter or fluctuating demand to diesel power.

MODERN TRANSPORT has an arrangement with Reuters Trade Service whereby publication is made in this newspaper of all essential news from all parts of the world concerning traffic and transport by rail, road, sea and air and allied interests.

### NEWS SUMMARY

FOLLOWING a series of meetings on October 10 between representatives of the British Transport Commission, the National Union of Railwaymen and the Confederation of Shipbuilding and Engineering Unions agreement was reached that craftsmen in railway shops should receive an extra 9s. 6d. a week and that the increase should be back-dated to January 11. It was subsequently announced that the N.U.R. had called off the strike by its members due to commence on October 17.

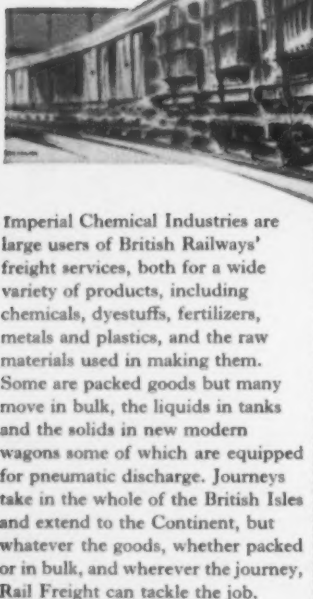
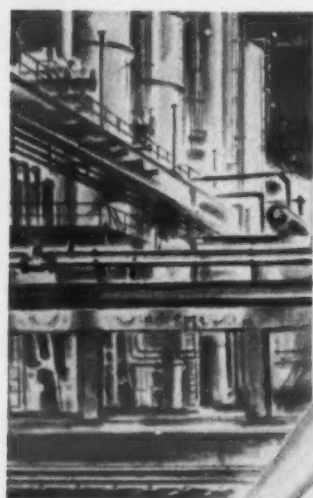
The London Midland Region has withdrawn No. 58086, the last Midland 0-4-4 tank engine,

of which in 1923 there were 226. Built in 1900 by a constituent firm of the North British Locomotive Company, this engine had run 1,476,559 miles.

Hither Green depot for Continental perishable traffic was opened by Sir Philip Warter, chairman of the Southern Area Board, on October 10.

Mr. K. W. C. Grand read his presidential address to the Institute of Transport on October 10—see page 5.

The British Government has decided to assist the Cunard Steam-Ship Co., Limited, in the replacement of the *Queen Mary*, largely on the basis of the Chandos Committee proposals. Some notes appear on page 20.



Imperial Chemical Industries are large users of British Railways' freight services, both for a wide variety of products, including chemicals, dyestuffs, fertilizers, metals and plastics, and the raw materials used in making them. Some are packed goods but many move in bulk, the liquids in tanks and the solids in new modern wagons some of which are equipped for pneumatic discharge. Journeys take in the whole of the British Isles and extend to the Continent, but whatever the goods, whether packed or in bulk, and wherever the journey, Rail Freight can tackle the job.

**EXPRESS FREIGHT TRAINS**—British Railways run more than 800 every day—many giving next morning arrivals over long distances. Charges are fully competitive. Ask your local Goods Agent for details.

Ask also about **EXPORT EXPRESS**. From many towns British Railways Export Express services give scheduled **NEXT-DAY DELIVERY** for wagon load traffic to London Docks (Royal, India and Millwall Groups), Merseyside, Manchester, Hull, Glasgow and Grangemouth.

**SPEEDED BY**

**BRITISH RAILWAYS**

**MODERN FREIGHT SERVICES**



## AT THE PARIS SHOW

### Smaller Commercial Vehicle Section

#### IMPROVED ECONOMICS OF NEW DESIGNS

IT might have been expected under the new arrangement of Federation Nationale de l'Automobile, which decided two years ago that the French commercial vehicle industry should exhibit only in alternate years instead of annually as hitherto, that the biennial commercial motor shows would be more extensive than in the past. Such is not the case at the present exhibition, the commercial vehicle section of which opened at the Parc de la Porte de Versailles on October 6. Normally occupying two large halls in the park, this year exhibitors of goods and passenger chassis and bodywork are confined to one hall only (the other having been given over to cycles and motorcycles). Many exhibitors have no under-cover stand at all, but have been content, or

Latest figures indicate that 1960 production and exports of commercial vehicles, excluding car-derived vans and utilities, are both running well ahead of last year, though the increase in production is greater than that in exports.

The actual figures for 1959 were 152,529 goods vehicles (other than small vans) and 2,648 buses and coaches produced, compared with 100,022 goods and 1,401 passenger vehicles in the first six months of 1960. During 1959 45,851 goods vehicles and 1,103 buses and coaches were exported, just over half to franc zone countries, compared with 28,605 goods and 501 passenger vehicles during the first six months of this year.

#### Principal Developments

In the main, such novelties as air suspension, disc brakes and turbocharged diesel engines are confined to prototype vehicles on show, as in the



Striking rectangular frontal treatment of a Berliet T25 18 cu. metre (23½ cu. yd.) dumper and half cab seen in the full 70-deg. tip position and, right, cab and body by G. Pelpel on a Bernard 19 tonnes gross chassis

have had to be content, with a position on the extensive outside park.

France is a country that makes extensive use of articulated vehicles for trunk haulage and both the inside and outside scene is dominated by huge van and tank semi-trailers. All of the major trailer constructors have become very rare conscious over the past year or so and box van semi-trailers of semi-integral construction, in both steel and aluminium, are the order of the day. There is wide diversity in

past, but in some cases these features are now offered in production vehicles. Production turbo-charged diesels are included, for example, in the standard Unic and Berliet ranges, while Saviem, Hispano Suiza, Willème and Bernard all have turbocharged engines developed up to the production stage. As far as combustion systems are concerned, Berliet has now apparently standardised the Meurer (M.A.N.) system, while Saviem has just introduced two new engines of four and six cylinders for both of which the Ricardo Comet V precombustion chamber has



The new Saviem SC5 touring coach for 31-37 passengers and, right, the new cab on the Saviem JL23 13-ton lorry

designs of semi-trailer bogie suspension, with several solid rubber and pneumatic conceptions, though the laminated steel spring, used with various compensating arrangements, still preponderates. Semi-trailer braking also shows some advancement, dual- and triple-circuit air brakes incorporating refinements to reduce response delay are now commonly used, while the Telma electromagnetic auxiliary brake has been developed for trailer as well as vehicle application and is being offered by some manufacturers.

#### Many New Vehicles

Despite the rather confined covered space allocated to commercial vehicles, most manufacturers have come forward with new chassis for the 1960 exhibition and the 1961 season, though many

been adopted. Citroën has developed its pre-injection system, first introduced in 1955, still further, but retains the Perkins P4 engine for its smaller vehicles and has adopted the Ricardo Comet III system for its new Type 100 diesel now offered as alternative to petrol in vehicles of 5 tons capacity upwards.

There is a trend towards wider transmission ranges, five-speed boxes generally replacing four-speed units in medium-weight vehicles and an increase from five to six gears, including overdrive, in the heavier road classes, with two-speed axles available optionally. Unic and Saviem both offer hydrodynamic-mechanical transmissions for extra-heavy vehicles, while Ateliers de Précision de Saint-Denis-Lès-Sens has now come forward with a new automatic hydrodynamic-epicyclic gearbox named Fluidmatic to compete with the existing semi-automatic epicyclic unit offered by the



Rear view of the new Cottard forward-control service bus and 35-seat coach by Verney incorporate Dunlop Pneuride suspension

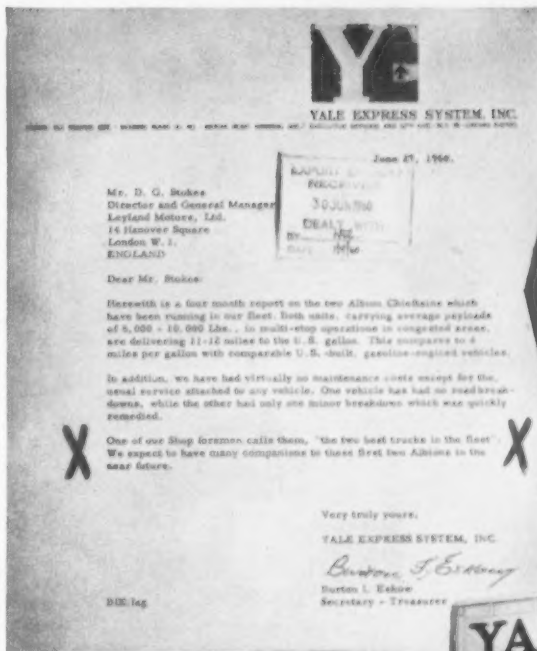
are shown al fresco as complete vehicles, making it more difficult to study detail design. Much of the novelty follows the lines evident at the recent Earls Court show and is aimed at improved operating economics by reduction of tare weight, new diesel engines of improved efficiency, wider-range transmissions and a generally easier time for the driver through better visibility, more-comfortable seating and servo assistance for such tasks as steering, gearchanging and so on.

Many of the new designs reflect the changes that have taken or are taking place in the expanding French motor industry, which have brought the grouping of several independent concerns into larger organisations, and also the necessity for the French industry to remain competitive in design and production efficiency in order to retain its commercial vehicle export markets, both in other Common Market countries and further afield.

French Wilson company. There appears to be little enthusiasm on the part of French operators to depart from conventional transmission, even in heavy off-road equipment.

Whether the same will be true of air suspension remains to be seen; there is certainly no lack of opportunity at the current exhibition of judging its merits, for it appears on about six different makes of semi-trailer, as well as on a new Bernard articulated tractor and on several passenger vehicles. The Dunlop Pneuride system has been adopted in the majority of cases. Disc brakes as yet have no general vogue, but Citroën continues to use a mechanically-operated transmission disc handbrake on its larger vehicles and the Messier hydraulically-operated twin-disc wheel brakes are fitted to the production Berliet T25 and T100 giant tractors and special-purpose vehicles. Recently

(Continued on page 8)



U.S.  
'top ten'  
haulier  
rates  
CHIEFTAIN  
'tops'

Such a tribute, coming from one of America's 'top-ten' hauliers, proves once again the fact which home operators have known for years: that for economy and reliability no 7-ton truck in the world can equal the Albion Chieftain.



7 ton CHIEFTAIN  
the mighty dollar earner-& saver

ALBION MOTORS LTD. Scotstoun Glasgow

Sales Division: Hanover House, Hanover Square, London, W.1. Tel: MAYfair 8561

NOW  
**A 27 FT. LONG**  
FRONT ENTRANCE  
**DOUBLE DECKER**  
FOR ANY CONVENTIONAL CHASSIS  
OF YOUR CHOICE

The front entrance double decker has come to stay. Its advantages are winning the approval of operators everywhere. With the platform constantly supervised by the driver, loading is at all times under control, and passengers board and alight in safety, thus promoting good passenger/crew relationship. Operators' experience has proved that the bus is easier for the crew to work, as the conductor can concentrate on the collection of all fares, while the driver does not have to wait for bell signals.



Similar bodies 30 ft. long, have already been supplied in large numbers to customers in Home and Overseas markets.

One of an order, 27 ft. long for Halifax Passenger Transport Department.



METROPOLITAN - CAMMELL - WEYMAN LIMITED

VICKERS HOUSE, WESTMINSTER, LONDON, S.W.1



## LORRY—BUS—COACH

## “Milk Run” to Moscow Next Year?

SO far this year the Continental Transport Ferry Service, which operates between Tilbury and Antwerp and Tilbury and Rotterdam, has carried 56 per cent more road vehicles than in the same period last year. In the first eight months of 1960 the total carried was nearly 5,000 lorries and trailers, more than 1,000 cars and about 6,000 passengers. Vehicles can get from Birmingham to Brussels in two days and to Moscow in little over a week. One haulier expects to take 200 loads to the British Trade Fair in Moscow next summer.

## British Coach Rally 1961

IT is announced that the seventh British Coach Rally will be held at Brighton on April 22-23, 1961. Full details of this event will be available from Mr. John H. Fielder, organising secretary, Transport World, 3 Fleet Street, London, E.C.4.

## Tanker Hijacked

SOMEONE removed an eight-wheeled tanker belonging to a Batley operator from a Liverpool street last week. It was found at Hale, on the outskirts of the city, jacked up and with all its wheels removed. The tanker was empty when stolen.

## Timber Haulage Know-How

THE newly formed timber hauliers' committee within the Metropolitan and South Eastern area of the Road Haulage Association, to assist members engaged in the carrying and distribution of timber, has produced some notes on the loading of timber, the average weights of standards of softwood, and the weight by cubic feet of hardwoods.

## London Cuts Sunday Mileage

ABOUT 50 Central bus routes will be affected by Sunday mileage cuts introduced this week by London Transport with its winter schedule. Altogether there will be a cut of 3 per cent in Sunday mileage on routes which have shown the biggest decrease in traffic. The drop in the number of passengers has been about 11 to 13 per cent compared with the numbers carried on Sundays last year.

## Defence of C-Licenceholders

WHEN Mr. S. C. Bond, president of Traders' Road Transport Association, spoke at the annual dinner of the West Midland Division of the T.R.T.A. at Birmingham, he said that most C-licenceholders and businessmen generally had been alarmed to read of a serious suggestion that there should be a discriminatory and steeply graduated tax on C-licence operators. The objects of this tax, it was said, would be first to discourage the use of the heavier types of C-licence vehicles and, secondly, to assist the railways. "My information at the moment is that this suggestion does not command much support, but it is difficult to say what may be going on behind the scenes. It does serve as a sharp reminder that traders must never

take for granted their right to operate their own vehicles in their own businesses." It would be quite deplorable if C-licence vehicles in this country should be so penalised. Surely their continual aim should be to make transport cheaper, not dearer.

## Park-n-Ride in Manchester

A MANCHESTER garage owner this week announced a "bus" service to and from his garage in Knott Mill, near the centre of the city, for car owners. Mr. E. Walker, who went into business as a garage owner only three weeks ago,

ex-American tank transporter bogie, the journey began early on Friday, October 7, and, despite the length of the load, the 435 miles was covered in 24 hr. travelling time with an arrival at Rush and Tompkins, Limited, plant yard at Ruxley Corner at 10.30 a.m. Sunday morning. Only one delay occurred whilst travelling through London, this being at the junction of Kennington Lane and Kennington Road, where a direct turn could not be made and various manoeuvres had to be attempted. It was found that the height at which the load could be carried was helpful in clearing a number of low obstacles.

## Sequel to Merchandise Transport Case

THE Metropolitan Licensing Authority has listed for hearing on October 25 under section 178 (1) (d) of the Road Traffic Act, 1960, two cases in the names of C. E. Dormer (Leyton), Limited, and C. E. Dormer (Islington), Limited. Section

Immediately the old directors resigned and Merchandise Transport directors took their places. It was a reasonable inference, said the licensing authority, that the vehicles ceased to serve the original customers. The object of the transactions, he said, was to add to the Harris Lebus organisation 38 A-licence vehicles which without further proof of need could be used for the carriage of furniture and return loads. Since it appeared that in the grant of the licences statements of intention may have been made which were not fulfilled it might be necessary to hold another public inquiry to determine the matter. He has now decided to hold an inquiry.

## Warrington Sell-Out

WARRINGTON haulage contractor Mr. Jack Priestley has sold three companies to Greenwoods (St. Ives), Limited, for £40,000—half in cash and half in shares. The companies are: Jay Pee Transportation, Limited, which runs a fleet of 27 vehicles with 23 trailers; Jack Priestley (1937), Limited, Foden and Seddon vehicle distributor; and Jay Pee (Contractors and Warehousing), Limited, which is not trading at the moment. Mr. Priestley remains as a director of the companies, which are expected to earn more than £8,000 profit in a full year. The managing director of Greenwoods is Mr. E. B. Greenwood, of Ramsey, Hunts. The group includes the haulage business Greenwoods (Contractors), Limited.

## No Jumping the Gun

SAYING that no one could accuse Manchester Corporation of "jumping the gun in the marathon race between wages and prices," Mr. F. Williamson, chairman of the North Western area Traffic Commissioners, last week granted the corporation's application for fare increases designed to yield about £387,000 in a full year. The higher fares will also come into effect on certain services operated jointly with the municipal undertakings of Salford, Oldham, Rochdale, Bury, Ashton, S.H.M.D. Joint Board, and the North Western Road Car Co., Limited. Announcing the decision, Mr. Williamson said it was obvious that the last national wage increase was the one, in effect, that "broke the camel's back," not only for Manchester but for other undertakings throughout the country. "The corporation has waited three years while costs have greatly gone up, and no corporation can be expected to face the deficits which Manchester Corporation expects." Asked by Mr. Williamson for an expected date for the introduction of the new fares, Mr. A. F. Neal, general manager, Manchester Corporation Transport Department, said it was hoping to introduce them on October 24.

## Bus and Coach Developments

Devon General Omnibus and Touring Co., Limited, and Burton Bus Service (J. E. M. and A. B. Geddes) propose joint operation on winter Sundays of the Brixham—Kingswear service.

Wye Valley Motors, Limited, Hereford, applies for excursions and tours from Hereford, Kingston, Hay-on-Wye and elsewhere licensed to G. H. Yeomans Motors, Limited.

East Yorkshire Motor Services, Limited, proposes a new weekday service between Hull and Hessle (Square) via Anlaby Road, Boothferry Road, Bethune Avenue, Cottessmore Road and Beverley Road.

London Transport has fitted heaters on both decks of 28 of its RT type double-deckers which are regularly used on Green Line duplication work. They are also being painted in the standard double-deck Green Line livery.



The Hope Transport A.E.C. Mandator making its first attempt to turn from Kennington Lane into Kennington Road (see accompanying paragraph)

on a new site in the shadow of the Knott Mill viaduct, plans to take customers leaving cars in his garage in to their offices each morning and pick them up again in the evening at some central point. No charge is made for the "bus" service; the cost of garaging is 10s. a week. About 50 cars are parked at the garage every day. The first journey was planned to begin at 8.50 a.m., and a shuttle service was to continue until 10 a.m. In the evening the van operating the service would be waiting at the central point from 4.50 p.m.

## Long Road for Long Load

ONE of the longest loads which it has so far handled was moved last week by Hope Transport, of Bedford, from Glasgow to Ruxley Corner, Sidcup. An overhead travelling crane, weighing 16 tons 17 cwt. and 110 ft. long, it was built by Paterson Hughes Engineering Co., Limited, Maryhill, Glasgow, and the work was contracted to Hope Transport by McCall's Road Services. Using an A.E.C. Mandator, with a single

178 (1) (d), formerly section 9 (4) of the 1953 Transport Act, concerns statements of intention which are not fulfilled. These hearings arise out of the applications by Merchandise Transport, Limited (a subsidiary of the furniture manufacturer, Harris Lebus, Limited), heard in June this year (MODERN TRANSPORT, June 25), to take over 38 vehicles specified in A-licences held by the two Dormer companies, which it already controlled. The licensing authority deferred decision on this part of what was a wider application by Merchandise Transport.

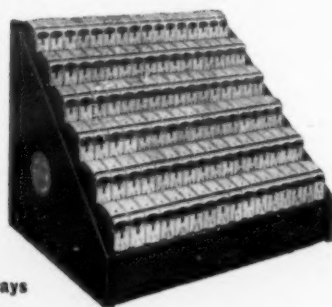
The circumstances in which Merchandise Transport acquired control of the 38 Dormer vehicles appeared, he said, to be that the two Dormer companies were formed to take over 20 and 18 vehicles respectively from C. E. Dormer, Limited. In each case they submitted letters from several customers who stated that they would be prepared to use the services of the new licence holder as before. No objections were sustained and the take-over licences were granted without public inquiries.

# TOP SPEED TICKET ISSUE with BELL PUNCH

## FARE COLLECTION SYSTEMS

Speed, ease, accuracy—  
these are the qualities  
everywhere associated with  
BELL PUNCH machines,  
four of which are shown here.

## THE BELLMATIC



For railways

Handy container units for  
clean, compact ticket storage.

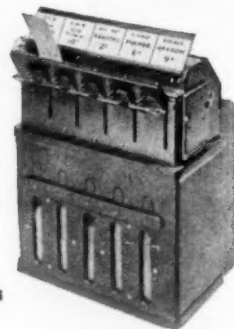
## THE SOLOMATIC



For one-man bus operation

Pre-printed coloured tickets from driver  
to passenger in a second—automatic  
overprint of stage, date, etc.

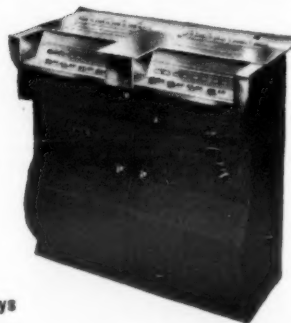
## THE ULTIMATIC



For railways

Speedy issue of pre-printed coloured  
tickets with automatic dating.

## THE S.P.



For railways

Self printing for speed and accuracy,  
issuing 2 tickets per second.



If you would like full information about these or about  
the many other products in the BELL PUNCH range,  
let us put you in touch with the BELL PUNCH distributor  
in your part of the world. He will gladly advise you on  
the BELL PUNCH method best suited to your needs.



# THE SCIENCE OF TRANSPORT

## Scope for Much Research

By K. W. C. GRAND, President, Institute of Transport\*

I WANT in this address to examine, as a transport man, our objectives, our capabilities and our future plans. I make no apology for reminding you of the main objects of the Institute as set out in our Royal Charter: "To promote, encourage and co-ordinate the study of the science and art of transport in all its branches," and I ask, should these not be among the objects of the transport industry as a whole? Not, of course, its primary objects: these must always be to serve the community and, incidentally, to make a living, but how can the industry fulfil its main objects without embracing with greater warmth than hitherto those for which the Institute was formed? For 40 years we in the industry have devoted most of our attention to the art of transport and this has been reflected in the proceedings of the Institute.

Science implies principles that apply not just to one form of transport but to transport as a whole; not just to one area or country but throughout the world. It is objective, impersonal and should be universal. It concentrates on facts, measures them, tabulates them, deduces principles, applies them and checks the results. In the decade on which we are entering, I hope to see increasing emphasis on the science of transport both pure and applied. Pure science is truth pursued for its own sake. Applied science is truth pursued with a particular object; and both are needed in transport as in other fields.

### Applied Science

I would define the applied science of transport as an analysis of all forms of transport to determine how each form may best be used, separately and in combination, in the interest of the public and the nation. The importance of this kind of science in the world today is clear. For transport, if allowed to grow unchecked by scientific analysis could develop until each nation possessed, on the one hand a collection of bankrupt public services, and on the other an astronomical fleet of privately-owned vehicles of all kinds which could only continue to move if cities were rebuilt and motorways multiplied. The real cost of transport would mount until it became a formidable proportion of the entire cost of living.

Scientific analysis properly applied will at least give us the opportunity to save ourselves from this kind of nonsense, by revealing the true choice facing the community as a whole and the costly chaos in which millions of individual choices will land those who take them without regard to wider issues.

### What is Involved?

For the science of transport has to pay attention to such items as efficiency, measured by output in relation to cost; and not just financial cost, which can depend on who pays for track and terminals, and how they pay; but real cost in human and material resources; to cost per unit of transport and cost per unit carried, two very different things, the second being governed by the load factor; to the extent of the demand for safety, speed, punctuality, regularity, reliability; and the effect of that demand on supply and on cost. There is here a whole network of interacting relationships which can alter with each technological advance. Note that all these items apply to transport of any kind, by land, waterway, sea or air; and apply to transport anywhere on the globe. Note, too, the importance of transport history. How misleading facts can be if studied without the backgrounds which gave rise to them!

I suggest that we need have no qualms about accepting the fact that there is a science of transport, a science which applies to transport of all kinds, and demands infinitely more study than has yet been given to it. The experience of past years shows that transport needs to have applied to it precisely the same technique as the traditional sciences. The great transport men of the past who helped shape the Institute certainly had no doubts about it.

### Encouraging Younger Men

With a membership of over 10,000 the numerical strength of the Institute is high, though not high enough. There is not always enough lead given from the top. It is one thing for leaders of the industry to speak well of the Institute and to refer in public to the value of membership to the younger men. Do they make it their business to see that the same encouragement is given throughout the departments of their own undertaking? Do they deal with any reports which might reach their ears of the cynical discouragement of attempts to "better themselves" by near superiors? How far do they reward those who achieve success? Do they recognise the passing of the Institute examinations as an important qualification for promotion? I ask these questions in all seriousness, not merely because they point the way to strengthening the Institute, but because I am convinced that the industry needs not only the long-term fruits of scientific study of transport but the short-term benefit of an articulate, educated, knowledgeable and enthusiastic staff, something which cannot be achieved simply by better wages and conditions, important though these are. I do not want to be accused at this point of special pleading on behalf of the Institute of Transport.

Within a transport undertaking there is a number of specialised jobs, and where appropriate, staff should be given the same encouragement to qualify themselves in their own particular special field: law, engineering, accountancy and so on. Some undertakings, my own included, have gone a fair way in this direction but my questions are general and need to be thought about. It is fair to say that associate membership of the Institute of Transport as a professional qualification is not yet on the same footing as associate membership of the great technical institutes. Perhaps it never will be. But if not, why not?

### Mental Strength

If our physical strength is reasonable, our mental strength is excellent. At one end of the membership scale, most of the senior people in transport are giving, or have given, of their best as members of council, as officers of the local sections and groups, as writers of papers, as contributors to discussion. At the other end we have a steady flow of intelligent and educated young men and women. In between, we have a larger number of former students who have broadened their know-

ledge of transport by studying for the examinations. The Institute has been right to insist upon a good standard of education for entry and to maintain a high standard in its own examinations. In consequence, it is right that membership without examination should to all intents and purposes be a thing of the past. It is clear, however, that on its present basis the Institute can do little more than keep going as it is. There is little scope in the present state of our funds for any headlong rush towards the promotion of our main objects.

Broadly speaking, the same applies to our physical and human equipment, which is determined by our financial strength. Our premises were wisely chosen and are adequate for administrative purposes. It would be idle to suggest, however, that the library and the services it renders are not capable of very great development, a development which must come if the Institute is to play its proper part in the future scientific study of transport. Scientific study is of academic interest only, if the results cannot be widely published. Here again, there is scope for development both in the *Journal* itself and in the sponsoring of research monographs. I hope that the industry will not tend to dissipate resources on this kind of thing for which the Institute could provide a more central and independent channel and one where men from different kinds of transport can meet together on a common basis and pool their varied experience in the way that it must be pooled if a science of transport is to develop.

### Public Standing

In some men their personality and the effect this has on other people is greatly in excess of their other characteristics. Personality can notoriously overcome defects of size and even of physique. It can sometimes, though less frequently amongst the discerning, overcome the inadequacies of a man's mental equipment. To some extent, the "personality" of the Institute, its standing, its "public image," call it what you will, is greatly in excess of its physical size. This is partly to be attributed to the foresight of the founders who set the Institute upon such sound lines and who achieved for it the dignity of a Royal Charter in the short space of seven years.

It is also to be attributed to the calibre of the long line of presidents and members of council which it has had at its head, who have seen to it that in all the controversial matters which have arisen in transport in the lifetime of the Institute, it has never once taken sides but has continued to provide a calm forum for discussion, at which members of all shades of opinion have been able freely to express their views. When one recalls the upheavals that have taken place, that is no mean achievement.

### University Recognition

Our determination to see that the scientific study of transport should not be neglected, culminated two years ago in the appointment at Oxford University of the first Reader in the Economics and Organisation of Transport and also of two research fellows. The creation of the readership was itself a fair measure of the esteem which the Institute and transport itself enjoys, because the idea was conceived and carried through under the aegis of the Institute, which appealed not only to the transport industry for the necessary funds but also to the great industrial users of transport. The readership was a big step forward in the acceptance of transport as a science and will, in time, do much to ensure its acceptance in academic and other circles. I am glad to note that the lead has been quickly followed by the creation at Birmingham University of a Department of Traffic Engineering and by the establishment at the London School of Economics of the Rees Jeffreys Fellowship. These are all great advances which augur well for the fulfilment of my hopes for the next decade.

There is little doubt in my mind that the Institute has the right objectives and, within the limits of the support which it receives from the transport industry, the capabilities to carry them out. The emphasis on a scientific approach to the study of transport in the next decade will turn to a very large extent upon the way in which the industry recognises its responsibility to itself, to its customers and to the community, to support the work of the Institute.

### Plans for the Future

A typical man of 40 often finds, after his reappraisal, that he is obliged to come to terms with life and reduce the number or scope of his objectives. There is no question of that in the case of the Institute which, unlike our typical man, can look forward to more than another 30 or 40 years of life. However, the Institute, like the individual, must nevertheless keep its feet on the ground and lay down for itself plans as well as objectives.

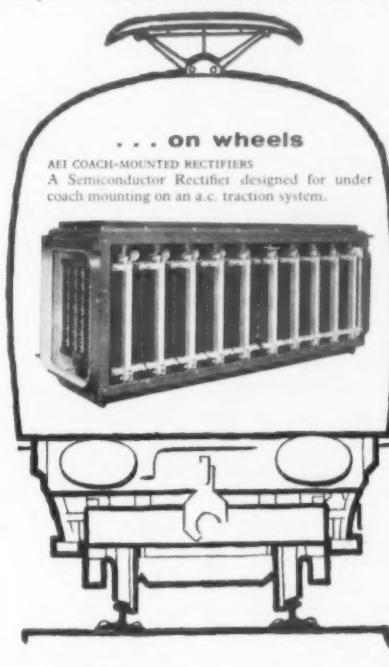
I believe that the Institute has been conducted on the right lines and is making progress towards its objectives. But there is still plenty of room for more student members, particularly from the larger undertakings in the industry which employ people by the thousand. The young people who are beginning careers in transport will never make the most of themselves unless they take the trouble to inform and educate themselves about the profession they have chosen. We can encourage them to do that. We can grip their interest, harness their enthusiasms, lift their horizons. We can make them feel wanted and responsible members of a great profession. I underline the word *profession*. Transport is basically a service and one in which so many are called upon to work away from direct supervision. The development of professional standards akin in quality to those of doctors and scientists is actually essential, if a transport service is to be what it ought to be. This is, in fact, another link between transport and science. But where young people meet the challenge of this career, perhaps unique in the way it combines control of men and control of machines, where they educate themselves and show that they can carry responsibility, then they ought to have it.

This is a subject near to my heart and I have long been saddened by the deadly slowness of promotion and appalled by that all too familiar remark "He's a bit young, isn't he?" It is a scientific fact that men are not equal in their character and talents. We are committed, and rightly committed, to making opportunities as equal as we can. But when the opportunity, the interview, has been given, let us not be afraid of

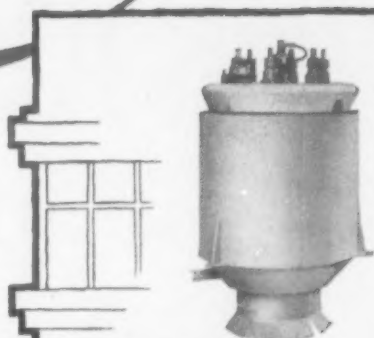
(Continued on page 15)

## RECTIFIERS for railway service

There's a wealth of experience and 'know how' behind AEI rectifier equipment for railway electrification. Three-quarters of a million kilowatts of AEI rectifiers are in service or on order for traction service in all parts of the world. This total includes 200,000 kW of semiconductor rectifiers ordered by the B.T.C. for British Railways' new 25 kV a.c. locos and motor coaches. AEI supplied the first British-built mercury-arc rectifier substation equipment to be commissioned in Britain, and were also responsible for the development of the first semiconductor rectifiers for traction duty.



... on wheels  
AEI COACH-MOUNTED RECTIFIERS  
A Semiconductor Rectifier designed for under coach mounting on an a.c. traction system.



at the trackside ...

AEI SUBSTATION EQUIPMENT  
Above: A six-anode pumpless steel tank rectifier for d.c. traction service. Below: Mercury-Arc Rectifier substation.



AEI Traction Rectification Equipment includes  
● SIX-ANODE PUMPLESS STEEL TANK MERCURY-ARC RECTIFIERS  
● SINGLE-ANODE STEEL TANK RECTIFIERS  
● GERMANIUM AND SILICON SEMICONDUCTOR RECTIFIERS

AEI

Associated Electrical Industries Limited  
Heavy Plant Division  
RUGBY, ENGLAND

A550 6

## EXPORTS

### to Northern Ireland and the Continent



### 'Drive-on drive-off' is quicker, easier, cheaper, safer

The drive-on drive-off ships of The Transport Ferry Service are the modern route across to Northern Ireland and the Continent. They're safer for your exports, the routes are simpler and you get faster deliveries. Lorries drive straight on to the ship from the quay and drive off again the other side. No loading and unloading. No handling delays. Breakages

and pilfering are reduced to the minimum. Packaging is reduced and therefore safer. Road transport sailing from Tilbury or Preston today delivers your goods abroad tomorrow! Send your own lorries if they conform to international regulations, or write for names of haulage contractors operating through trunk services.

## THE TRANSPORT FERRY SERVICE

(ATLANTIC STEAM NAVIGATION CO. LTD.)

25 WHITEHALL · LONDON · S.W.1 · Telephone: WHitehall 5564 Telex. 23482

REGULAR & FREQUENT SAILINGS BETWEEN TILBURY & ANTWERP  
DAILY SAILINGS BETWEEN PRESTON AND NORTHERN IRELAND (LARN OR BELFAST)

T.F.S.J.

\* Abstract of the presidential address in London on October 10.



# ALL THE YEAR ROUND ON ALL YOUR VEHICLES

## Specify the oil that saves

—money, time and wear!

Are you still using yesterday's methods of engine lubrication or have you changed over to new BP ENERGOL MULTIGRADE OILS? These new SAE 10W/30 oils, designed specifically for use in engines in good mechanical condition, give the finest trouble free service all the year round—on all your vehicles. And just see what you save!

### SAVE

on fuel. Under stop-start conditions you can save up to 10%. You can get worthwhile saving on long distance work too.

### SAVE

engine wear. Immediate oil flow, even at lowest temperatures, saves abrasive and corrosive wear occurring during engine "warm-up".

### SAVE

on battery life and starting wear through easier starting under all conditions.

### SAVE

time and money. You need buy only one oil for diesel and petrol vehicles—and you cut out all the bother of inter-season oil changes.

There are 2 Grades:—  
BP ENERGOL DSI MULTIGRADE for engines requiring "Supplement 1" lubricating oil and BP ENERGOL DD MULTIGRADE for engines requiring oil with less additive.



BY APPOINTMENT TO  
HER MAJESTY QUEEN ELIZABETH II  
SUPPLIERS OF LUBRICATING OIL

Distributed by

**THE POWER PETROLEUM CO. LTD**

Head Office: 76-86 STRAND · LONDON W.C.2 (Branches and Depots throughout the country)

A NEW STANDARD OF QUALITY FOR ALL COMMERCIAL VEHICLES



**EXTENDED PERFORMANCE  
— PROVED RELIABILITY**



The reliability of Darham tanks has long proved itself on performance—year in, year out, mile after mile, under the most arduous conditions. The product of precision craftsmanship, Darham reliability and 'know how' make sure your bulk loads arrive safely, on time—and at an overall cost that represents the ultimate in present day economy.

There are individually designed Darham road tanks and transportable tanks for every liquid and powder—fabricated in mild steel (suitably lined where necessary), stainless steel or aluminium: competitively priced and ready for early delivery. Certain types of tanks are now available from stock.

Official fitting agents for 'Tecalmit Syndromic' and 'A.C.L.' automatic chassis lubrication equipment. Free advice on these and all other tank matters is yours on request to the Darham Technical Advisory Service.

**Darham**

**DARHAM INDUSTRIES (LONDON) LIMITED**

Tavistock House East, Woburn Walk,  
Tavistock Square, London, W.C.1.

Tel.: EUSTon 9393 (15 lines).



MODERN TRANSPORT  
OCTOBER 15, 1960

## ABANDONMENT OF TRAMWAYS

Complete Systems Replaced by Buses  
and Trolleybuses (Cont.)

WE continue below the list of complete tramway abandonments in the British Isles, reprinting of which was commenced in our issue of October 1.

Date	Undertaking	Replaced by
January 19, 1929	Perth Corporation.	Motor buses.
February 28, 1929	Gravesend and Northfleet Electric Tramways, Limited.	Motor buses.
March 4, 1929	Lincoln Corporation.	Motor buses.
March 10, 1929	Mexborough and Swinton Traction Co., Limited.	Trolleybuses.
March 14, 1929	Hastings Tramways Company.	Trolleybuses.
April 2, 1929	Kidderminster and Stourport Electric Tramways Company.	Birmingham and Midland motor buses.
June 30, 1929	Jarrow and District Electric Traction Company.	Northern General motor buses.
July 11, 1929	Swindon Corporation.	Motor buses.
July 15, 1929	Greenock and Port Glasgow Tramways Company.	Motor buses. Name changed to Greenock Motor Services Company. (Now an S.M.T. subsidiary.)
July 15, 1929	Greenock Corporation.	Motor buses.
July 15, 1929	Gourock Corporation.	Motor buses.
September 28, 1929	Wolverhampton and District Electric Tramways Company.	Trolleybuses. (Wolverhampton Corporation).
December 8, 1929	Colchester Corporation.	Motor buses.
December 31, 1929	Barton-on-Trent Corporation.	Motor buses.
December 31, 1929	Gosport and Fareham Tramways Company.	Motor buses.
February 12, 1930	Maidstone Corporation.	Trolleybuses.
February 15, 1930	Chester Corporation.	Motor buses.
March 1, 1930	Dudley, Stourbridge and District Electric Traction Co., Limited.	Motor buses. Midland motor buses.
March 1, 1930	South Staffordshire Tramways Co., Limited.	Walsall trolleybuses and motor buses.
March 31, 1930	Lancaster Corporation.	Motor buses.
April 6, 1930	Tyneside Tramways and Tramroads Company.	Motor buses.
April 30, 1930	Leamington and Warwick Electrical Co., Limited.	Motor buses.
August 16, 1930	Yorkshire Traction Co., Limited. (Barnsley and District Electric Traction Co., Limited.)	Motor buses.
September 30, 1930	Chatham and District Traction Company.	Motor buses.
September 30, 1930	Rochester Corporation.	Motor buses.
October 19, 1930	Littleborough U.D.C.	Motor buses.
November 15, 1930	Peterborough Electric Traction Co., Limited.	Motor buses.
November 30, 1930	Ashton-in-Makerfield U.D.C.	Motor buses.
December 31, 1930	Cheltenham District Traction Company.	Motor buses.
January 8, 1931	Ilkeston Corporation.	Nottinghamshire and Derbyshire Traction Co. trolleybuses.
February 7, 1931	Nottinghamshire and Derbyshire Traction Company.	Motor buses.
February 14, 1931	Lanarkshire Company.	Motor buses.
February 28, 1931	Hindley U.D.C.	Motor buses.
February 28, 1931	Ince-in-Makerfield U.D.C.	Motor buses and trolleybuses.
March 5, 1931	Wednesbury Corporation.	Motor buses.
March 28, 1931	Wigan Corporation.	Motor buses. (West Bromwich and Walsall Corporation.)
March 31, 1931	Ramsbottom Corporation.	Trolleybuses abandoned.
May 7, 1931	Musselburgh and District Electric Light and Traction Company.	Motor buses over most of system. Part sold to Edinburgh Corp.
May 8, 1931	Lowestoft Corporation.	Motor buses.
May 15, 1931	Dundee, Broughty Ferry and District Traction Company.	Dundee Corporation motor buses.
May 15, 1931	Kirkcaldy Corporation.	Motor buses.
June 6, 1931	Altrincham U.D.C.	Motor buses.
June 7, 1931	Barton-upon-Irwell R.D.C.	Motor buses.
June 7, 1931	Kearsley U.D.C.	Motor buses.
July 18, 1931	Sale U.D.C.	Motor buses.
August 4, 1931	Tynemouth and District Electric Traction Co., Limited.	Motor buses.
August 19, 1931	Exeter Corporation.	Motor buses.
August 30, 1931	Pontypridd U.D.C.	Trolleybuses.
September 21, 1931	Cheadle and Gatley U.D.C.	Motor buses.
September 30, 1931	Cork Electric Supply Company.	(Great Southern Railways).
September 30, 1931	Scarborough Tramways Company (Corporation purchased to scrap).	United Automobile Services buses.
November 21, 1931	Carlisle and District Transport Company.	Motor Buses.
December 31, 1931	Ayr Corporation.	Motor Buses.
December 31, 1931	Stockton-on-Tees Corporation. (Thornaby Corporation absorbed August 1, 1931.)	Motor Buses.
January 31, 1932	Wemyss and District Tramways Company.	Motor Buses.
March 12, 1932	Birkenhead U.D.C.	Motor Buses.
March 31, 1932	Accrington Corporation.	Motor Buses.
March 31, 1932	Rawtenstall Corporation.	Motor Buses.
April 3, 1932	Birstall U.D.C.	Yorkshire Woolen District motor buses.
April 3, 1932	Spenborough U.D.C.	Do
April 5, 1932	Barrow-in-Furness Corporation.	Motor Buses.
April 16, 1932	Luton Corporation.	Motor Buses.
May 14, 1932	Racup Corporation.	Motor Buses.
May 14, 1932	Whitworth U.D.C.	Rochdale motor buses.
July 25, 1932	Yorkshire (West Riding) Electric Tramways Co., Limited.	Motor Buses.
August 6, 1932	Minrow U.D.C.	Rochdale motor buses.
October 9, 1932	Mansfield District Traction Company.	Motor Buses.
November 12, 1932	Rochdale Corporation.	Motor Buses.
December 31, 1932	Dublin and Blessington Steam Tramway.	Motor Buses.
January 11, 1933	Gloucester Corporation.	Motor Buses.
January 11, 1933	Gloucestershire County Council.	Motor Buses.
January 11, 1933	Llanelli and District Electric Supply Co., Limited.	Trolleybuses.
February 16, 1933	Castlederg and Victoria Bridge Tramway.	Competing motor buses.
April 17, 1933	Walsall Corporation.	Trolleybuses.
September 30, 1933	Dearne District Light Railways Joint Committee.	Yorkshire Traction Company buses.
September 30, 1933	Dewsbury, Ossett and Soothill Nether. (National Electric Construction Co., Limited.)	Yorkshire Woolen District motor buses.
October 29, 1933	Ossett Corporation.	Do.
October 29, 1933	Wallasey Corporation.	Motor Buses.
November 30, 1933	South Lancashire Transport Company.	Trolleybuses.
December 16, 1933	Great Yarmouth Corporation.	Motor Buses.
December 14, 1933	Torquay Tramways Co., Limited.	Devon General motor buses.
January 31, 1934	Rhondda Tramways Co., Limited.	Motor Buses.
February 1, 1934	Rhondda U.D.C. (Leased.)	Rhondda Transport motor buses.
February 1, 1934	Heywood Corporation.	Motor Buses.
May 2, 1934		

(To be continued)



## BRITISH AIR SERVICES

### Twelfth Report of A.T.A.C.

THE Air Transport Advisory Council is nearing the end of its existence, but its twelfth annual report covering the year to March 31, 1960, which was published last week (H.M. Stationery Office, price 5s.) shows that it was kept busy with the consideration of applications to operate services and tours. Since then, as the former Minister of Aviation, Mr. Duncan Sandys, remarks in his preliminary statement, the council has been largely concerned with transitional measures to enable the new arrangements for the Air Transport Licensing Board to come smoothly into force.

As already indicated, the council's main work again lay in considering applications from the two airways corporations and from independent companies to operate scheduled air services and circular tours. It was the council's constant endeavour that independent companies should be allowed as much scope as possible to develop scheduled air services and circular tours within the limits set by the terms of reference and by the Minister's letter of June 5, 1958.

#### Increased Number of Applications

Although the number of applications again increased considerably, the rate of increase was rather less than in the previous two years. 1,095 applications were received during the year which, with 151 outstanding at April 1, 1959, made a total of 1,246 to be considered. Of these, 91 were withdrawn by the applicants and the council made recommendations to the Minister on 1,034 applications, leaving 121 outstanding at March 31, 1960. In no case did the Minister find himself unable to accept the council's recommendation. During the course of the year the council held 119 meetings.

Comparative figures of passenger traffic carried by independent companies on all types of scheduled services in the last two years were:

Type of service	Passengers carried 1958-59	1959-60 (provisional)
Normal scheduled	229,179	274,799
Colonial coach and coach	17,000	19,130
U.K. internal	296,087	366,552
Inclusive tour	180,014	186,671
Vehicle ferry	224,612	291,083

Traffic increased considerably on all types of services except inclusive tours, the sharp fall there being in marked contrast to the developments of the last five years, during which this class of traffic had increased more rapidly than any other. This fall was no doubt attributable to several factors. On both normal scheduled services and internal services, traffic more than recovered its 1958-59 drop. The traffic carried by independent companies on domestic routes was:

	Passengers carried 1958-59	1959-60 (provisional)
Channel Islands routes	187,788	217,688
Isle of Man routes	80,158	94,695
Other internal routes	31,141	54,268

On vehicle ferry services, the decline in the numbers of bicycles and motorcycles was continued but other loads again increased apace, as shown below:

Type of load	Numbers carried 1958-59	1959-60 (provisional)
Cars	65,612	97,455
Motorcycles	7,463	8,380
Bicycles	1,315	1,653
Freight, short tons	5,850	9,652

Following the reconstruction of the Government after the general election on October 8, 1959, the civil aviation responsibilities of the Minister of Transport and Civil Aviation were transferred to the Minister of Aviation as from October 21, 1959. Having for some time before then recognised that the arrangements which had been established in July, 1952, for controlling the operation of scheduled air services would soon need revision, the Government on February 15, 1960, introduced in Parliament the Civil Aviation (Licensing) Bill, the objects of which included the creation of a new licensing system for air services and the establishment of an Air Transport Licensing Board in place of the present Air Transport Advisory Council. That Bill having now been enacted the council's existence is likely to be terminated during the present year.

#### Merging of Interests

Several developments occurred amongst the independent companies during the year. The Airwork group of companies further extended their interests by acquiring Bristol Helicopters, Limited, and in March, 1960, reached agreement with the Hunting-Clan group on the notable course of merging the air transport interests of the two groups into a single organisation to be known as British United Airways, Limited. Agreement was also reached for the Cunard Steam-Ship Co., Limited, to acquire a major interest in the Eagle group of companies. The British Aviation Services group decided to concentrate all its air operations, except those of Manx Airlines, Limited, in the hands of Silver City Airways, Limited, and, on the council's recommendation, the appropriate transfer of services was approved.

On the other hand, the countervailing trend for more companies to apply to operate scheduled services was continued with the submission of applications by Trans-European Aviation, Limited, Bristol Helicopters, Limited, Falcon Airways, Limited, and North-South Airlines, Limited. None of the applications from those companies was advertised or considered during the year under review, however, because of the need to make preliminary enquiries of the Ministry about an applicant company's operational standing and of the National Joint Council for Civil Air Transport about the company's terms and conditions of employment before proceeding with applications. This increase in the number of companies applying to operate scheduled services was partly offset by Independent Air Travel, Limited—and its successor in name, Blue Air, Limited—being compulsorily liquidated and by Luton Airways, Limited, discontinuing its operations.

#### Normal Scheduled Services

The majority of the normal scheduled service applications recommended for approval during the year was for amendments to services already approved and for renewal of services in cases where the period of approval had expired. The development of services from the provinces was further encouraged, particularly with the approval of additional services by Derby Aviation, Limited,

and by Dan-Air Services, Limited, from the area of Swansea, Cardiff and Bristol to Basle, to Amsterdam and to Deauville. The growing attraction of the Irish Republic as a holiday area was reflected in the approval of two more services from provincial centres to Dublin. In addition to these developments of services from the provinces, several services were approved to operate from London and nearby airports to continental destinations not previously served by direct air connections. For example, Tradair, Limited, was approved for services to Groningen, to Maastricht and Nuremberg and also to Seville and Agadir, which was later so disastrously wrecked by earthquake; Eagle Airways, Limited, was approved to serve Brindisi, Silver City Airways, Limited, to operate to Gorizia and British European Airways to Palermo and to Zagreb. In proposing services to these new areas, the operators concerned showed a realistic appreciation of the requirement that new services should develop genuinely fresh traffic markets rather than compete for traffic which was adequately catered for by established services.

#### Internal Services

As a counterpart to the services from the provinces already mentioned from South Wales and the West Country, Dan-Air Services, Limited, was approved for a network of internal services radiating from Cardiff, Bristol and Plymouth. The provision of supplementary weekend capacity on Channel Islands routes during the peak summer season again engaged the council, which was greatly assisted by the Channel Islands Air Advisory Council. The 1959 traffic figures and the advance bookings for 1960 showed that the air traffic demand on these routes was recovering well from the temporary setback of 1958 and additional capacity was in consequence approved for operation in 1960. The council were also called upon to consider proposals for the transfer of services to Bournemouth (Hurn) Airport in the event of Southampton (Eastleigh) being closed, but detailed recommendations in this connection were judged to be premature in view of the fact that the necessary handling facilities at Hurn were unlikely to be available before 1961.

#### Inclusive Tours

The number of applications for inclusive tours again increased, reaching a total of 746, and with those outstanding at April 1, 1959, there were 796 in all to be considered. Of these 69 were withdrawn whilst under consideration and the council dealt with 704, recommending 316 for approval wholly or in part—some of them subject to qualifications—and 388 for rejection so that 23 applications were outstanding at the end of the year under review. Five applications were withdrawn after the council had made its recommendations but before the Minister had taken his decisions and two applications had to be rejected only because the foreign aerodromes concerned were not available or were inadequate. The number of late applications for summer tours diminished in a gratifying way, but the council was disappointed that no fewer than 78 tours services were withdrawn after approval.

It would be difficult to believe that, in a year when British air traffic generally showed a marked recovery from the 1958 pause in its expansion, fewer people should have taken inclusive holidays by air. The explanation of this paradox appeared to lie largely in the fact that a growing amount of this type of holiday traffic was being carried by other means than inclusive tour services approved under associate agreements. There was no doubt that the lower fares becoming increasingly available on normal scheduled services were attracting more inclusive tour passengers on to normal scheduled services. That was an understandable development. What was less desirable was the great increase in the number of services purporting to cater for group travel and not for the general public. Services catering for bona fide "closed groups" did not fall under the control of Section 24 of the Air Corporations Act, 1949, but more and more services appeared to cater for groups which had little or no purpose apart from the provision of cheap travel and whose membership was not limited so as effectively to prevent people joining merely to secure that particular benefit. The definition in Section 24 was not so clearly drawn as to prevent the exploitation of such devices, which operated to the detriment of genuine "closed group" flights and at the expense of traffic on approved inclusive tour services. The stage now appeared to have been reached at which spurious "closed group" operations were undermining the work of the council and one of the objects of the Civil Aviation (Licensing) Act, 1960, was to bring services of this kind under proper control.

In addition to these general factors, there was a more specific one to which might be attributed the actual fall in traffic on inclusive tour services as opposed to the absence of any increase. This arose from the fact that in October, 1958, the Minister had to defer consideration of any services applied for by Independent Air Travel, Limited. That company had in 1958 carried a considerable volume of holiday traffic on approved services and, had it been operationally acceptable, would have been similarly approved for 1959. In the event it was not operationally cleared and, although the council recommended for approval as far as possible requests from the travel agents affected for the transfer of the services concerned to other operators, a number of services was not transferred. Large numbers of holiday passengers were in fact carried by the company—or by its successor, Blue Air, Limited—but as they were not carried on services approved under associate agreements they are not reflected in the traffic figures given.

#### Vehicle Ferry Services

Two new vehicle ferry services to Dublin were approved on the council's recommendation, one for B.K.S. Air Transport, Limited, from Liverpool which is now in operation, and one for Silver City Airways, Limited, from Anglesey which cannot be introduced until military circumstances enable the airfield at Valley or Mona to be made available for civil operations on a reasonably long-term basis. Applications from Air Charter, Limited, and from Silver City Airways, Limited, for networks of services penetrating more deeply into the Continent than their existing cross-Channel services were considered but no decision has yet been reached on those applications. At the Minister's suggestion the two companies have entered into discussions to rationalise their interests in this respect.

## CONVEYANCER

# D4-24 / G4-24

4000 lb. of handling power  
at a modest cost



This model has been designed to give quick and easy access to the Engine, Transmission and Hydraulic equipment during routine servicing—special attention has also been paid to driver comfort with controls based upon standard Automobile practice

★ Styled bodywork with hinged canopy gives quick and easy access to power unit

★ Designed for driver comfort — full width bench seat with access from both sides

★ All controls positioned forward of the driver within full vision and easy reach

★ Gear change control also positioned on the forward dash — eliminating the possibility of accidental contact and again giving free driver access from both sides

★ Quick removable clutch unit — complete removal and fitting accomplished in 1½ hours

★ Diesel, Petrol and L.P. Gas versions

★ 4,000 capacity at 24" load centre

★ High lift speed, 44' per min. — fully laden

★ Roller type mast can be fitted to give minimum closed height

★ Detachable end fittings on all hydraulic pipes provide cheap and easy replacement

Free illustrated literature available on request

*Conveyancer*

FORK TRUCKS LIMITED  
LIVERPOOL ROAD, WARRINGTON  
Telephone 33241, Grams Hydraulics, Warrington  
MEMBER OF THE OWEN ORGANISATION

Can you spot magnesium . . .



...on the Wessex?

No, not on a normal service aircraft, but if the magnesium alloy parts of the fuselage were painted white you would see a picture like the one above. The Westland family, Whirlwind, Widgeon and Wessex, all take advantage of a combination of aluminium and magnesium alloys for maximum strength with extreme lightness.

Pioneers in light alloys

**Birmetals**

BIRMETALS LIMITED · WOODGATE WORKS · BIRMINGHAM 32



## Commercial Vehicles at Paris Show

(Continued from page 3)

introduced French regulations regarding braking performance have led to general improvements in this respect, and the use of an auxiliary brake, such as the Telma electromagnetic or the S.A.M.M. hydraulic unit, is now compulsory on certain types of vehicle in some regions of France. A competitive unit in this field, much lighter in weight than

occupying some 3,500 sq. yd. The company has introduced a number of new goods and passenger chassis, notably of smaller capacity than it has offered in the recent past, and has made various alterations to existing vehicles in the range, which as far as road vehicles is concerned goes up to articulated tractors for the maximum permitted



One of the two 24-wheel bogies of the Robert hydraulic-suspension trailer for 114,000 kg. (112 tons) gross weight; overall length is approximately 100 ft.

either the Telma or S.A.M.M. ralentisseurs, is a new exhaust brake, offered in several sizes to suit most existing engines, introduced by Fowa.

### New Berliet Vehicles

Berliet, the oldest of the French heavy vehicle producers as well as the biggest, with a current output of 1,300 chassis a month from its various plants, has the largest display on the outside park.

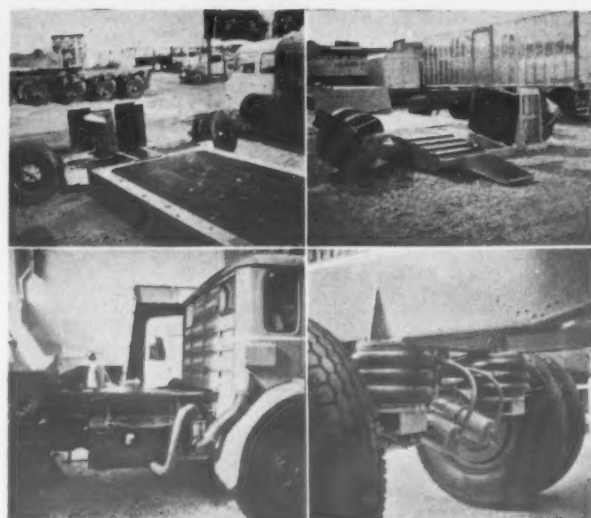
French gross weight of 35 tonnes. The modifications mainly have introduced changes in cab styling, separate water-pump and fan drives on all M-system diesel engines, double- and triple-circuit air brakes on two- and three-axle vehicles to safeguard operation in case of local failure and hydraulic-power steering in place of the old pneumatic system. A new fully articulating bogie has been introduced for the heavier vehicles.

The new Berliet chassis illustrate the trend towards lower tare weight. They include the GCK 8 goods chassis for 16 tonnes gross weight and body lengths up to 22 ft. 9 in. which has a tare of only about 5 tons. Features include 150-h.p. M-system diesel engine, air-pressure brakes and hydraulic assistance for clutch operation and steering. Two new goods chassis have been added at the lower end of the range for payloads of about 4 and 6 tons respectively, equipped with the established 80-h.p. diesel engine and a new five-speed synchromesh gearbox, and a corresponding lighter weight articulated tractor for gross combined weight of about 20 tons. Principal changes to Berliet passenger vehicles comprise new synchromesh gearboxes throughout the range and the introduction of two new light-weight medium-capacity coaches—the Fugue for 28 to 33 seats and the Rallye for 36 to 43 seats.

### Bernard Air Suspension

Chief point of interest on the Bernard stand is a prototype two-axle tractor incorporating Dunlop Pneuride air suspension at both axles. It is fitted with a new light-alloy forward-control cab by G. Pelpel with a striking rectangular frontal treatment in which the traditional Bernard radiator form has been retained as an ornament in the new radiator grille. The tractor is shown coupled to a Fruehauf bogie semi-trailer tank also with Dunlop air suspension. The new Pelpel forward-control cab is also seen integrated with a large box-van body on a companion Bernard long-wheelbase chassis.

Novelty on the Citroën stand takes the form of a new alternative diesel engine and five-speed gearbox for its 5-ton normal- and semi-forward-control range, including the four-wheel-drive Tout-Terrain, and a new T55 normal-control articulated tractor, with similar optional petrol or new diesel engine, with air-pressure braking for payloads of up to 13,750 kg. (13½ tons). The new diesel, Type



The Fruehauf France Simplimatic low-bed machinery trailer built under Nicolas licence has playing wheels for drive-on loading; it has trailing-arm and Neidhart rubber-in-torsion independent suspension; the right-hand view shows the platform and ramp on one side dropped for loading. Below: left, clean air for the underfloor-engined Saviem chassis (15.9 tonnes solo) in this case fitted with Samson 6½ cu. yd. tipping body; right, Dunlop Pneuride equipment in Baj and Fond single-axle semi-trailer—no dampers are fitted

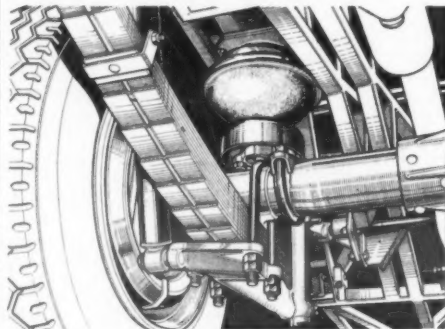
100, is a six-cylinder water-cooled four-stroke, with bore and stroke of 100 mm. by 110 mm. giving a capacity of 5.18 litres. Using the Ricardo Comet III precombustion chamber, it has a maximum governed speed of 2,500 r.p.m. and develops 86 b.h.p. at 2,300 r.p.m.

### New Saviem Diesels

The Saviem group, France's second largest producer of heavy-duty vehicles, comprised originally Renault, Somma and Latil and now also includes the big passenger vehicle manufacturer, Chausson. Group production during the first six months of this year was 1,742 road tractors and lorries and 988 passenger chassis (411 Saviem and 577 Chausson). The group has introduced 10 new vehicles at the show—three lorries, two articulated tractors and five passenger vehicles, based principally on two new indirect-injection diesel engines.

Named Fulgur, the new engines comprise four- and six-cylinder water-cooled four-stroke units, with a horizontal version of the six, using many common components and of significantly lower specific weight than earlier diesels. Bore and stroke dimensions are 110 mm. by 120 mm., giving capacities respectively of 4.56 and 6.84 litres and S.A.E. maximum ratings at 2,500 r.p.m. of 100 h.p. for the four-cylinder and 150 h.p. for the six-cylinder engine; maximum torque is developed at 1,650 r.p.m. A compression ratio of 20 to 1 is used, with Ricardo Comet V precombustion chambers and in-line fuel-injection pumps.

Along with the new engines in the new chassis have gone various other changes, including new



Already familiar on Renault Dauphine cars, Aérostable suspension is now fitted to several of the new Saviem SC range of passenger vehicles

forward-control cabs for the goods vehicles, a new five-speed gearbox, optional two-speed rear axle and adoption of the Evidom suspension for the heavier goods vehicles and Aérostable suspension for certain of the passenger vehicles. The Evidom suspension comprises conventional leaf springs and rubber auxiliary springs and the Aérostable system, already familiar in the Renault Dauphine car, comprises a light leaf spring with air-filled rubber spring interposed between axle and chassis frame. Aérostable is now fitted to the rear of buses up to the heaviest 100-passenger single-deckers.

### Unic Additions

Unic, since last year the heavy-vehicle division of the Simca organisation, has introduced two new goods vehicle ranges at the show. The Auvergne is a normal-control chassis in traditional Unic form, but of lower tare weight than earlier vehicles. It is available in various two-axle lorry versions for gross weights up to 16 tonnes (about 11 tons payload) and articulated tractor form for a gross combined weight of 27 tonnes. The power unit is a new indirect-injection four-stroke six-cylinder diesel developing 150 h.p. at 2,600 r.p.m. The other new chassis is a forward-control version of the already established normal-control Vosges series. Unic also manufactures under licence various Saurer, O.M. and Fiat chassis.

The small Verney company has introduced two new air-spring passenger vehicles this year, a 35-seat coach and a 45-seat service bus. Both employ Dunlop Pneuride bellows and levelling valves in a fully independent system for each axle. The Verney vehicle is of integral construction and the company uses a variety of proprietary running units, including Hispano Suiza diesel engines and G.M.C. gearboxes.

Willème shows five vehicles from its extensive heavy-vehicle range, all of which have been subject to detail changes since the last exhibition. The greatest apparent change is in the introduction of a forward-control range of lorries and tractors, with a striking new cab by Cottard, bearing the unmistakable stamp of that coachbuilder, features of which are full sound and heat insulation in a double-skin construction and automatically folding steps ahead of the front wheels operated by the doors. Other changes include reductions in tare weight, a new six-speed overdrive gearbox, double- and triple-circuit air brakes and improvements in fuel efficiency and power output of diesel engines. The range of engines now employed comprise a four-cylinder unit developing 130 h.p., a six-cylinder unit developing 190 h.p. and an eight-cylinder engine developing 250 h.p., all at 1,900 r.p.m.



Thames 15 cwt. Van

... it's a success story. Whether you sell something to eat or something to cook with, it's success for you from the moment you order your first Thames, from the moment you make your first delivery. Success all the way because of Thames business-like style: because wherever Thames are parked, they bring credit to your name. Success because Thames are so easy to manage and drive, so easy to pay for and run. And the more you know about Thames, the more you like them. Like an introduction? Go and see your Ford Dealer. He'll tell you how to put Thames to work — most successfully for you!

# THAMES VANS BY FORD

BRITAIN'S BEST SELLERS—THAMES VANS AND TRUCKS



# ACCIDENTS ON BRITISH RAILWAYS

*Greater Safety from Modernisation*

## DANGERS FROM TRESPASSING

THE tendency of modernisation to reduce the accident toll on British Railways and the fact that only one passenger was killed in train accidents (as compared with 18 in 1958 and 92 in 1957) are among interesting features of the report for 1959 of Brigadier C. A. Langley, Chief Inspecting Officer of Railways (H.M.S.O., 5s. net) to which brief reference was made in our October 8 issue. In fact, since the war deaths from train and movement accidents have been halved, while collisions and derailments have decreased by a third. Much has been done, he says, to increase railway safety. Modern signalling installations have been

much better guide to safety efficiency; it shows that numbers have fallen for the third consecutive year. The year's total of 1,154 is the second lowest since the war and it is 6 per cent less than the average of the first 10 postwar years 1946-55. The rate per million train-miles, however, has remained steady at 2.8 for the last three years, as illustrated by Fig. 2. The number of accidents due to human failures and technical defects, which had risen in 1958, has also fallen and the trend is now also slightly downwards, the year's total of 722 being 2½ per cent less than the average for the first 10

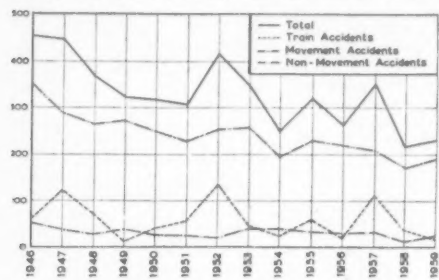


Fig. 1. Fatalities in railway working

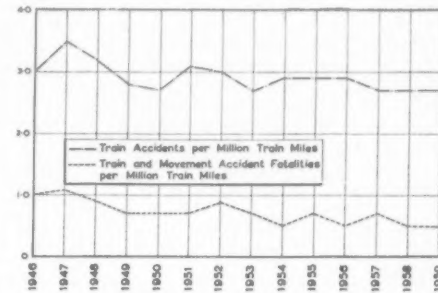


Fig. 2. Train and movement accident rates

brought into use to aid drivers, and continuous track circuiting and block controls to help signalmen in controlling traffic which on British Railways is of greater density than anywhere else in the world.

Then there is the automatic warning system of train control, pioneered by the Great Western Railway. By the end of this year the new British Railways equipment will be in operation between Kings Cross and Newcastle, Euston and Stafford, Basingstoke and Exeter, Edinburgh and Glasgow, Edinburgh and Berwick and on some of the lines recently electrified on the high-voltage overhead system, in all some 2,200 route-miles, while 3,500 locomotives will have been fitted, in addition to those with the G.W.R. apparatus.

Some 46 per cent of the major main lines are now laid with the new flat-bottom rails, and 201 miles of stretches of not less than a quarter-mile

postwar years. This trend is primarily due to the reduction in accidents resulting from technical defects.

The downward trend in train accidents is also illustrated by Fig. 5, which gives the number of passenger and freight-train collisions and derailments, the two types which produce the most serious results both in casualties to passengers and destruction of stock. The year's total of 335 is the lowest since the war and nearly 20 per cent lower than the average for 1946-55. This diagram is reproduced on page 12.

### Other Causes

On the other hand, accidents at public and occupation level crossings have fluctuated from year to year but have shown little change in trend. Several of the accidents emphasised once again the manning difficulties referred to in previous reports.

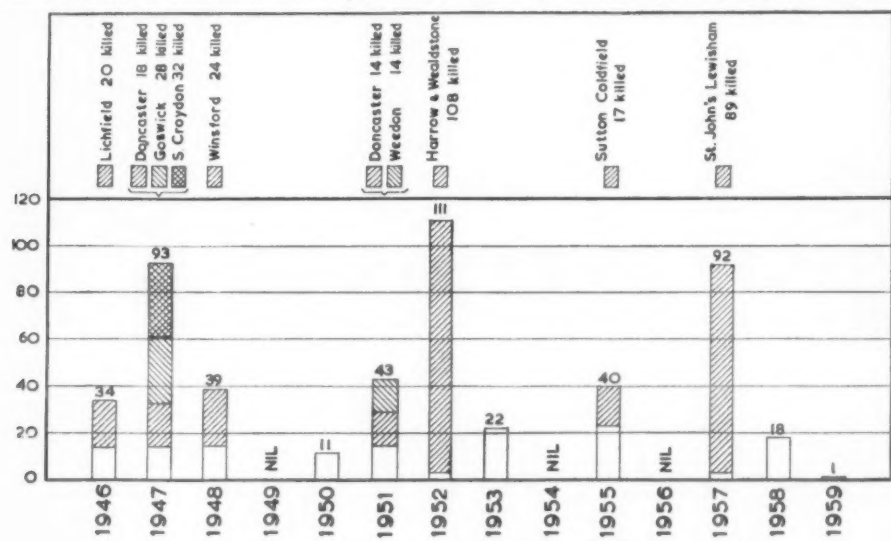


Fig. 3. Train accidents—passenger fatalities

are of long welded rails, mainly on concrete sleepers. In addition to new forms of motive power, large numbers of new passenger and freight vehicles have also been brought into use, and almost all merchandise vehicles are now equipped with the automatic vacuum brake.

### Improving Efficiency and Safety

Most of this work, states Brigadier Langley, has been undertaken to improve efficiency, to produce economy or to attract custom, but progress towards modernisation also aids safety, both directly and indirectly. Some works, namely A.W.S., conversion of distant signals from semaphore to colour light and provision of block controls, have been authorised on safety considerations alone. "Safety on the railway," he says, "depends upon the maintenance of high standards of discipline and morale, upon the vigilance of the staff, their concentration on their work and their intelligent compliance with the rules; upon the provision of adequate aids and safeguards; and upon the proper maintenance of track, structures, equipment, locomotives and rolling stock. My review has shown to what extent these ideals are being achieved; but to maintain, let alone improve, the present high safety standards requires a contented, well-disciplined staff who take a pride in their work and in the fine organisation to which they belong and who must be assured that British Railways will continue to play a vital role in the life and prosperity of this country."

The report, which is in improved form and contains several new and useful graphs, states that as a result of reduced traffic and more efficient working, but also on account of the difficulty in keeping and recruiting staff for some types of work, the total numbers employed on British Railways and the London Transport railways fell from 572,860 to 541,190, a reduction of 5½ per cent during the year.

### Fatalities

As the safety aspect is largely judged by the number of fatalities particular interest attaches to Fig. 1. Although the fatalities from all causes rose in 1959 to 231 there has been a general downward trend since the war and the train and movement accident fatality rate per million train-miles has been halved in 14 years, as is shown in Fig. 2. This is primarily on account of the substantial reduction in movement accidents, though there has been a setback this year. Train accident fatalities on the other hand have fluctuated violently as can be seen by Fig. 3, which illustrates clearly the effect on statistics of a single accident, such as St. Johns, Lewisham, in 1957, or Harrow in 1952.

An analysis of the train accidents (Fig. 4) is a

stated to be still too high; it is nearly 53 per cent of the total for all train accidents. As pointed out in the Chief Inspecting Officer's reports for 1957 and 1958, train accidents caused by drivers passing signals at danger have in the past accounted for a large number of the fatalities and it is considered desirable to pay particular attention to this type of accident. It will be recalled that at the request of the B.T.C. the Medical Research Council is now investigating all such cases of human error. To advise them on this research the Council has appointed, under the chairmanship of Professor George Drew, a committee on the human factor in railway accidents which had its first meeting in December, 1959. The major investigation at

(Continued on page 12)

# 35 FOUR-CAR TRAINS for 25 kV 50 cycle AC electrification



being built by British Railways at Wolverton Works for the MANCHESTER—CREWE

AND

LIVERPOOL—CREWE SERVICES

are being fitted with



## ELECTRO-PNEUMATIC BRAKES

the modern brakes that provide the powerful rapid-acting control required to operate fast passenger services on a close schedule

Brakes designed and made in England by

Westinghouse Brake and Signal Co. Ltd., 82 York Way, London, N.1

## CLASSIFIED ADVERTISEMENTS

CLASSIFIED ADVERTISEMENTS should be addressed to THE MANAGER, Classified Advertisements, MODERN TRANSPORT, Russell Court, 3-16 Woburn Place, London, W.C.1.

RATES.—The minimum charge for classified advertisements is 7s. for 14 words or less, and 6d. for each additional word. The name and address of the advertiser is charged at the same rate. If a box number is used 2s. extra is charged to cover our name and address and postage. If set in paragraph form each paragraph is estimated separately. Official Notices and semi-display in the classified columns are charged at the rate of 48s. per single column inch.

### BUSINESSES FOR SALE

MOTOR Carriers live business West Croydon; Vehicles and Premises for sale. Write Box No. 3848, MODERN TRANSPORT, 3-16 Woburn Place, London, W.C.1.

IRELAND. One of the largest Agricultural, Motor Engineering firms in Ireland. Sale by Transfer of Shares. Full particulars from Morrissey and Sons, Limited, Auctioneers, Lower Merrion Street, Dublin. Phone 65781.

### FOREIGN EMPLOYMENT ROADMASTER

ENGINEERING graduate preferred; minimum of two years' engineering training essential. Require two years' varied railroad engineering service, or five years in direct charge of track crews. Will supervise 135 men maintaining 45-mile railroad, assign work, order materials, be responsible for safety, make regular detailed inspections of roadbed and all track on main line, sidings and yards, bridges, tunnels, etc. Will make engineering calculations relating to maintenance and use of structure and equipment. Must speak Spanish. Married or single candidates acceptable. Excellent opportunity large copper company, Chile, South America. Two-year contract with transportation both ways for you and family. Base salary \$525.00 to \$650.00 per month depending upon age and experience of applicant. Box No. 3848, MODERN TRANSPORT, 3-16 Woburn Place, W.C.1.

## MODERN TRANSPORT

The Transport Newspaper with the World-Wide Reputation

ONE SHILLING WEEKLY

Annual Subscriptions:

CANADA - 45s.

BRITISH ISLES - 47s. 6d.

ELSEWHERE ABROAD - 47s. 6d.



# CAN YOU AFFORD NOT TO TRY Shell Rotella Multigrade?



**Shell Rotella Multigrade Oils**  
LEADERSHIP IN LUBRICATION

## NEWS FROM ALL QUARTERS

### L.M.R. Stations to Close

On and after November 7, Haslingden, Middlewood Higher, and Arley and Fillongley, stations on the London Midland Region will be closing to passenger or all traffic.

### Irish Railway Stock Bought

An American airline operator from New Jersey has purchased a locomotive, a coach, wagons and signalling equipment from the County Donegal Joint Committee. He is to use it on a private pleasure railway in the U.S.

### Maidstone—Sittingbourne By-Pass

To cope with the increased traffic expected when both the Medway Towns motorway and the Maidstone bypass are in use, the Maidstone to Sittingbourne road (A249) is to be reconstructed for two miles. The village of Detling will be by-passed.

### Sheffield—Glasgow Container Express

A new express freight train between Sheffield and Glasgow has been introduced by the Eastern and Scottish Regions of British Railways. It is a special overnight service and gives next-day deliveries in Glasgow of consignments in road-rail containers of various weights and cubic capacities. The service will accept all container loads for Glasgow presented at Sheffield Wicker depot by 4.30 p.m. Road collection and delivery arrangements have been specially planned.

### Ruthlessness Pays in Parking Schemes

Income from the parking meter zones in Westminster will probably yield an annual surplus of more than £250,000, including fines and penalties, it was stated at a one-day conference on parking in London last week. This is intended to be devoted to the construction by the city council of off-street parking places. The Joint Parliamentary Secretary to the Ministry of Transport, Mr. John Hay, said that the demand for off-street parking could be stimulated by "quite ruthlessly" enforcing payment for street parking. The first few weeks of the ticket system in Mayfair had already proved its worth. A large number of police officers was being freed for more traditional duties.

### Trolleybus Goes Parisian

London Transport trolleybus No. 796, a Leyland M.C.W. vehicle built in 1938, made a cross-Channel trip last weekend to the Musée des Transports Urbains, Interurbains et Ruraux in Paris to which, as earlier recorded in MODERN TRANSPORT, it had been presented. It travelled as deck cargo on the *Lord Warden*. Save for a last few months at Walthamstow, it was always attached to Bexleyheath depot, but, at the request of its new owners, it now carries Edmonton depot destination blinds, since one of the displays reads "Edmonton (Tramway Avenue)." Whether this illogicality particularly appealed to the French is not stated; Tramway Avenue, which leads to the depot, has not seen a tram for 20 years.

### August New Registrations

During August there were 14,212 goods vehicles registered for the first time compared with 11,370 in 1959, according to provisional figures. The number of new cars registered was nearly double that of August, 1959, 52,380 compared with 28,568.

### Dean and Dawson Centre Closing

Dean and Dawson's overseas reception centre at 14, Bolton Street, W.1, will close on October 31 and the service will be transferred to Thos. Cook's overseas reception centre in Berkeley Street. With the transfer of its last remaining department from Bolton Street, Dean and Dawson will vacate the premises and Mr. Dunn, the manager, together with the other staff, will be transferred to Cook's at Berkeley Street.

### Westerham Branch Closure Justified

The Transport Users' Consultative Committee for London has rejected pleas that the Danton Green to Westerham branch of the Southern Region should be kept open. The committee is satisfied that substantial economies would be achieved if the line were shut, and that adequate bus services would be provided between Westerham and Sevenoaks stations. One of the main objections raised was, however, the substantial increase in travelling costs that would be involved.

### Road Safety Ideas

The whole of the second day of the National Safety Congress, October 19, will be given up to a road safety forum to discuss the controversial proposals, all submitted by R.O.S.P.A. accident prevention federations. They include the introduction into Great Britain of a scheme of awarding black marks to drivers, with the withdrawal of licences in cases where drivers receive a maximum; penalties for parents who allow young children to be unaccompanied on busy roads; penalties for unqualified driving instructors and regulations for pedestrians. The congress will be officially opened by the Minister of Transport.

### M1 Extension to Yorkshire

The Minister of Transport has announced the making of the scheme fixing the route of the second part of the London—Yorkshire Motorway. The scheme follows the draft line published in January this year, except for one minor modification altering the plan of the bridge across the Erewash Canal at Stanton Gate. The new 86-mile route runs from the present terminal of the M1 at Crick, near Rugby, through Northamptonshire, Leicestershire, Derbyshire and Nottinghamshire, and ends in the West Riding at a junction with the new Doncaster by-pass on A1, which is under construction and due for completion next year. Through Leicestershire the route adopted follows the "compromise" line proposed by the Leicestershire County Council as an alternative to two earlier proposals which met with strong objections on agricultural and amenity grounds. The next step will be to publish proposals for the alterations to side roads and private means of access which will be affected by the construction.

## 2 NEW GIANTS BY DUNLOP

WITH GIGANTIC BUILT - IN STRENGTH... GRIP...

DURABILITY...ECONOMY...AND UP TO 20% EXTRA MILEAGE



Fantastic strength and toughness, immense wear-resistance, surpassing grip—that's what Dunlop have built into these new Giant nylon tyres.

Just look at the rugged non-ribbed tread of the RK8 with its powerful interlocking segments! Never before has a tyre offered such positive, biting grip on loose surfaces, yet the pattern is close enough and stable enough to give long mileage and traction on normal roads. This is an ideal rear tyre for heavy trucks operating on and off the road!

The RK9 is no less impressive. Here is a complementary extra-depth pattern of 3-rib design to give exceptionally long mileage with very high resistance to irregular wear. Note the 'broken', studded shoulder which gives powerful traction on soft ground. The RK9 is ideally suited to front wheels of heavy vehicles with RK8 on the rear or for all-round fitment on lighter vehicles.

# DUNLOP

CRM/1560/412



## COMMERCIAL AVIATION

### British Aircraft Venture

#### LEGAL LIABILITY

IT has been announced by the Pressed Steel Co., Limited, that it is taking steps to form a subsidiary company to be known as British Executive and General Aviation, Limited, which will concentrate upon the design and manufacture of a new range of executive and light aircraft for the home and export markets. Pressed Steel is acquiring the whole of the share capital of Auster Aircraft, Limited, for a consideration of £525,000, to be satisfied, in part, by the issue to the Auster shareholders of 264,000 Pressed Steel 5s. ordinary shares, the balance being in cash. The intention is to continue the production and further development of the existing Auster range of light aircraft. At the same time, a technical and manufacturing liaison has been arranged with F. G. Miles, Limited, of Shoreham Airport. This new group of companies is also entering into discussions with Rolls-Royce, Limited, in connection with a series of Rolls-Royce power plants for this class of aircraft. Mr. M. A. H. Bellhouse, deputy chairman of Pressed Steel, will be chairman of Beagle and Mr. J. R. Edwards, managing director of Pressed Steel, will be a member of its board. Mr. Peter G. Masefield, who has joined the board of Pressed Steel, will become managing director of Beagle and chairman of Auster Aircraft. Mr. F. Bates and the other executive directors will remain on the board of Auster; Mr. Bates becoming deputy chairman, and at the same time retaining his position as managing director. Mr. George H. Miles will be appointed technical director on a co-ordinating board, which is to be formed under the chairmanship of Mr. Masefield.

#### P.A.S. to Start Boeing Service

Persian Air Services has announced that, with effect from November 1, it will operate a weekly Boeing 707 service from Brussels via Geneva to Tehran. This will supplement the twice-weekly direct DC7C services from London, via Brussels or Paris and Geneva to Tehran.

#### More B.O.A.C. Jets to Middle East

The British Overseas Airways Corporation is to introduce Comet 4s on its routes to Abadan and Doha from November 1. The jet flights will serve these cities weekly, in addition to the weekly Britannia service already in operation. The Comet service will leave London on Tuesdays, and Abadan and Doha on Thursdays.

#### Replacement for Renfrew

With the exception of Ayrshire County Council, which, not altogether surprisingly, favours use of Prestwick as the airport for Glasgow when Renfrew becomes finally inadequate, other local authorities and the Scottish Advisory Council for Civil Aviation are in favour of using the naval airfield at Abbotsinch. Recently Paisley Town Council was told that the Minister of Aviation hoped soon to be able to make a statement on the subject.

#### Airport Planned for Colchester

Colchester may have a municipal airport based on the disused aerodrome at Wormingford. Plans are being considered by the town council and Colchester and District Industries Association has shown considerable interest in the plan. An operating company's offer to prepare a report on the use of Wormingford as an airport and to lease the aerodrome when established is being considered by the council.

#### New Services Approved

The Minister of Aviation, after considering the recommendations of the Air Transport Advisory Council, has approved the operation of the following services:

An inclusive tour service to be operated by Tradair, Limited, between Southend and Nice from September 19 to October 31, 1960.

An inclusive tour service by Air Safaris, Limited, between London (Gatwick)—Palma from September 23 until October 8, 1960.

An inclusive tour service by B.K.S. Air Transport, Limited, on the route Newcastle—Barcelona—Palma from September 23 until October 9, 1960.

#### S.A.S. Polar Jets to Tokyo

The first Douglas DC8C service directly over the North Pole region was inaugurated on October 11 by Scandinavian Airlines System. The aircraft covers the 4,400 statute miles between Copenhagen and Anchorage, Alaska, in approximately 8½ hr. Anchorage is the one intermediate stop on the 8,000 statute mile route between Europe and Japan. S.A.S. introduced DC8 jets on its polar route between Europe and the United States west coast last June. During the winter it will operate two weekly DC8 flights in each direction over the Pole.

#### Liability for Passengers and Cargo

At a meeting at headquarters of the International Civil Aviation Organisation in Montreal, the I.C.A.O. Legal Committee has developed draft rules to settle certain liability problems arising in the case of international carriage by air of passengers, baggage and cargo. These problems arise with respect to the application of the Warsaw Convention of 1929 when an aircraft is chartered or hired with crew. These problems also arise when, under other arrangements between carriers, air carriage is performed by some one other than the person who entered into the contract of carriage with the passenger or consignor. Under the convention the person who has entered into the contract is presumed to be liable, unless he proves he was not at fault, in the case of damage occurring to a passenger or to cargo; on the other hand, his liability is limited as to maximum compensation, with certain exceptions. The purpose of the new rules prepared by the legal committee is to apply to the person actually performing the carriage the same legal regime, namely the Warsaw rules, as that applicable to the contracting carrier. A key provision of the new draft convention stipulates that the acts and omissions of the actual carrier, his servants and agents (for example, pilots) in relation to the carriage performed by the actual carrier should be deemed to be also those of the contracting carrier and vice versa. This provision affords the claimant an opportunity of suing both carriers under a system where each will be answerable for the acts and omissions of the other. The Montreal text also limits the liability of servants and agents of both carriers and specifies the effect of complaints and orders given to the carriers. It nullifies any clause which may exclude or diminish the liability of the carrier below the specified limit, prescribes jurisdictions in which actions may be brought, and prohibits the claimant from collecting damages more than once. The I.C.A.O. council will shortly decide whether the draft convention will be submitted to a diplomatic conference for final approval and signature.

## A TRAVELLED TRANSPORT CONSULTANT



Professor E. R. HONDELINK, M.I.C.E., M.Inst.T.

At the age of 70 Professor Englebert Roger Hondelink is reducing somewhat his professional obligations, thus ending one of the most strenuous tours of duty ever carried out by a transport consultant, in the course of which he has travelled to every part of the world. Educated in the Netherlands, he graduated as a civil engineer at Delft Engineering University in 1911. For the next decade he was in the service of the former Holland Railway Company, his duties including international railway research. From 1921 to 1926 he was with the Chinese National Railways, being engaged in the construction and, subsequently, the operation of the Lunghai Railway, Eastern Division, first as deputy engineer-in-chief and later in the combined office of general manager and chief engineer. The position was more interesting than easy. During the ten years 1926-1936, Professor Hondelink acted as a consulting engineer to foreign governments, and British and international syndicates in the planning, construction and administration of transport and communications by rail, road and water. This work took him to many widely separated quarters of the globe, including China, Manchuria and Japan, Australia and New Zealand, Ireland, Canada and the United States, the Near East and East Africa. During this period he was consultant on the Japanese takeover bid for Russian railways in Asia, but he settled in London for his permanent residence. In 1936 Mr. Hondelink was appointed professor of transport engineering operation and economics at his old university of Delft. Invasion of the Low Countries in May, 1940, surprised him in Brussels, on the way from Delft to his London home. On arrival he immediately lent his services to the furtherance of the British war effort, working as an adviser to British ministries from the Railway Research Service office. In 1942 he was appointed chairman of Technical Advisory Committee on Inland Transport or T.A.C.I.T., part of the Allied Relief Bureau under Sir Frederick Leith Ross, planning postwar rehabilitation and development. It was a natural step to be appointed Director-General of the European Central Inland Transport Organisation, or E.C.I.T.O., in May, 1945; during its regime much valuable work was done but governments turned from co-operation to nationalism and it came to an end in December, 1947. Professor Hondelink then became an adviser to the World Bank, becoming a naturalised British subject in 1948. His assignments have led him to many places, Turkey, Iraq, British Guiana, Malaya, Japan and African countries among others, in the course of preparing reports on transport projects and their prospects. He had remained a member of the Delft senate and was five years ago created emeritus professor. Professor Hondelink is a director of the Elastic Rail Spike Co., Limited.

## SHEFFIELD TRAMS

### Last Journeys

#### VALEDICTORY DINNER

THE last trams in public service in the City of Sheffield ran soon after midday on Saturday, October 8, when the Vulcan Road to Beauchief service was taken over by motor buses. With the fall of darkness all was yet animation at the Tenter Street depot, where the Townhead Street upper floor, normally devoted to buses, became a car park for participants in the ceremonial procession to mark the end of 87 years of public service by tramways in the steel city. Just before 6 p.m. the last cars of all set off in a brilliant procession, incorporating an open top illuminated car, the passengers on which were in period costume, played off by the transport department band.

Also in the procession was a single-deck car reconstructed from some recently found relics to represent the vehicles which ran on steep gradient routes until 1921. More modern cars, including a number of the vehicles built by Charles Roberts in 1946, carried invited guests of the Corporation, and members of the outside public who had responded to the invitation to apply for places, for which there had been keen competition, one enthusiast having flown from America. The final car of the 15 carried the Lord Mayor's party. Tens of thousands of people stood in drenching rain to see the procession pass and hundreds of cars also followed.

#### Farewell Dinner

Returning from Beauchief to the Town Hall, the company assembled for dinner and was welcomed by the Lord Mayor of Sheffield, Alderman Harold Slack, who referred to the wonderful services of the drivers and conductors, especially during the blitz, and to the marvels of the first electric car as they seemed to him in 1899. He also paid a tribute to the services rendered by the general manager, Mr. Rowland Moore, the pleasure given them by the Sheffield Transport band under its director of music, Mr. Ralph Williams (who directed the traditional Sheffield fanfares upon the introduction of each speaker), and concluded with congratulations to the chairman of the Transport Committee, Alderman Sidney Dyson.

The toast, "The Sheffield Transport Department," was proposed by Mr. E. R. L. Fitzpayne, general manager, Glasgow Corporation Transport Department, who congratulated Sheffield upon the arrangements made and said he had noted them with pleasure and interest; he hoped that in 1962 they in Glasgow would be able to do as well. They had come to the end of the tram era. It ought to be a warning to them all, because the motorists who hooted that day to mark the passing of the last trams would hoot just as madly if the last bus ran. It was up to them to see that it never happened and that the bus always had its place.

#### The Tramcar's Virtues

It was just 100 years since the first street tramway operated in this country. We should eulogise them because they must have given pleasure to countless millions of citizens, who had a more comfortable ride than on the motor bus. In his opinion, if it were not for the tramcar, the country would never have had municipal transport in the wide sphere in which it had flourished. There had been in Britain an acceptance of municipal transport among people of all political opinions—an acceptance not given to nationalisation. There was no counterpart to the 200 questions in Parliament about the B.T.C. nor the many letters to M.P.s. Moreover, men like Alderman Dyson did not need even a part-time salary.

It was appropriate that they should mention Arthur Fearnley, one of the great municipal managers in this country. On page 9 of the excellent brochure issued to mark the passing of the tramway era an actual pay sheet was reproduced and one of its virtues was that there were no deductions. In those days the man at the end of the week got the money he had earned. People should, nevertheless, remember that because of the National Joint Industrial Council men and women today were not working 102 hours in the week. Although the outlook might be bleak, as long as they had efficient managers like Mr. R. C. Moore, and public-spirited men like their chairman, Alderman Sidney Dyson, the future could not be in doubt.

#### Making History

In his response, Alderman Dyson said that Mr. Fitzpayne represented what was best in British public life; he rendered great service to the transport industry as a leader of N.J.I.C. That evening they should have sorrowing hearts; they had evidence that municipal tramway transport had endeared itself to the Sheffield citizens over many years. He felt that if any other things were to be put in national ownership municipal enterprise was the pattern on which it should be based. They appreciated the service rendered by their employees and they had been blessed by a succession of very fine general managers. Through her sons he would like to send a message to Mrs. Fearnley and say how much they were indebted to her husband. That day was a sad one for him if only because it was the last great public occasion on which Mr. Rowland Moore would be present as general manager. He was glad to have representatives of bus manufacturers there who took £2 million worth of steel each year from Sheffield, and sent out 60 per cent of their products for export.

At Alderman Dyson's request, Mr. Moore made a valedictory speech on the historic nature of the occasion. There was, he said, an entry in his father's diary for 1899 regarding the first electric tram in Sheffield—on which he took Rowland for a ride. He little thought he would ever sit in A. R. Fearnley's chair; anyone who did so would be one of say half-a-million general managers, but would be bound to think of the architect of the department. They marked the passing of an era, but entered a new one, and he was quite sure the bus undertaking was entering upon a new lease of life. So long as he had a chairman like Sidney Dyson he had no anxieties at all. "We have achieved certain things since he joined me six years ago; I leave a reserve of one million pounds for the replacement fund. My great regret is that owing to staff shortages we cannot produce the full service we would like."

The proceedings concluded with presentations of souvenir uniform buttons to the Lady Mayoress and to the American visitor, a gong to the Lord Mayor as a civic memento, and a mirror from a tramcar to the Lord Mayor for himself. A Sheffield-made horseshoe was presented to the 85-year-old Alderman P. J. M. Turner, a tramwayman of long ago.





## TWO HUNDRED AND TWENTY SIX LOCOMOTIVES FOR BRITISH RAILWAYS



226 Brush Type-2, 1250/1365 H.P. Diesel Electric Locomotives have been ordered for British Railways, over half of these are already in service and output is maintained at a steady two locomotives per week.



**BRUSH TRACTION DIVISION**

BRUSH ELECTRICAL ENGINEERING CO. LTD. LOUGHBOROUGH, ENGLAND (A Member of the Hawker Siddeley Group).

## Accidents on British Railways

(Continued from page 9)

present being undertaken is a statistical study of all the circumstances that may possibly have some relevance to the driver's error in every case when an adverse signal is passed. The Commission and the trades unions concerned are actively co-operating in this work and it has been possible for

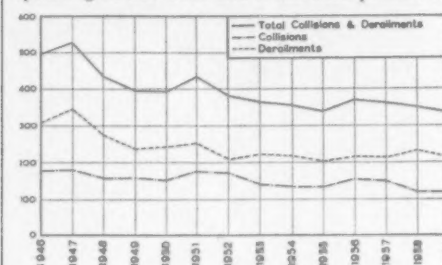


Fig. 5. Train accidents—collisions and derailments

members of the committee to attend, as observers, inquiries held by the Ministry's inspecting officers. It is satisfactory to note, states the report, that in 1959 accidents from these drivers' errors dropped to 44, which is 36 per cent less than the average for the first 10 postwar years.

### Need for Safety Campaign

Accidents caused by other human failures such as other irregularities by train crews, errors by other staff and combined errors have risen steadily since the war and the figure of 514 is 13 per cent greater than the average for the first 10 years of

the period under review. Although total casualties to railway servants in movement and non-movement accidents were practically the same as in 1958, fatalities at 153 unfortunately increased by 28 or 22½ per cent above last year's total of 125, which was the lowest recorded since the war. It is urged that a safety campaign should be vigorously pursued to reduce casualties to the staff.

### Trespassing

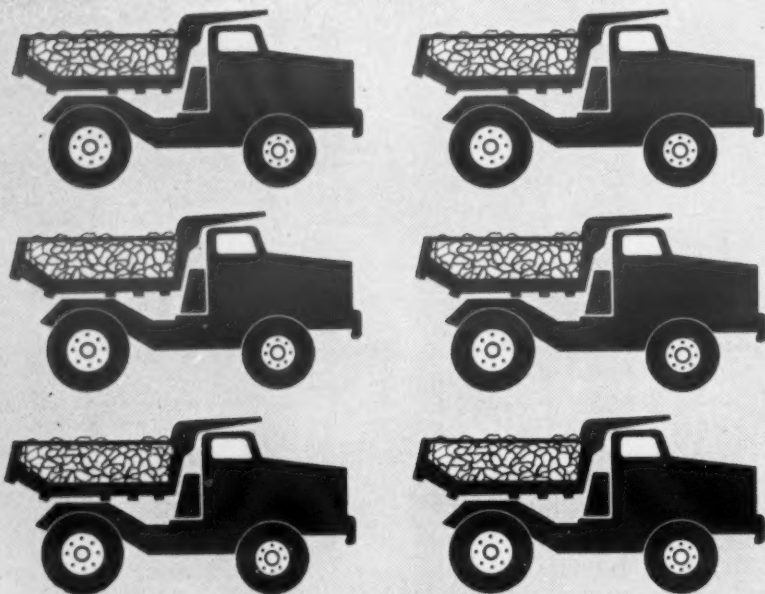
As regards casualties to trespassers, examples are given of the dangers which arise, especially to children venturing on the railway. Not only do trespassers endanger themselves, states the report, but sometimes they wilfully endanger others, as occurred at Smedley Viaduct, near Manchester, where children who interfered with the signalling were primarily responsible for a collision between a light engine and a passenger train. Cases have also occurred of obstacles being placed on the line and of other deliberate sabotage—such irresponsible actions should not be condoned; they should be treated as offences against society. A vigorous education campaign is needed to impress on children of all ages, and on parents, too, the danger of trespass on the railway and the serious consequences which arise from interference with railway property. In view of the serious cases of this nature which have occurred recently this must be regarded as one of the most important points in the report.

Pritchett and Gold and E.P.S. Co., Limited, maker of Dagenite batteries, has opened a new Glasgow depot at Langside Lane, 346 Langside Road, Glasgow, S.2. The telephone number is Pollok 5944.

## FERRYING CONTINENTAL PRODUCE TO ENGLAND



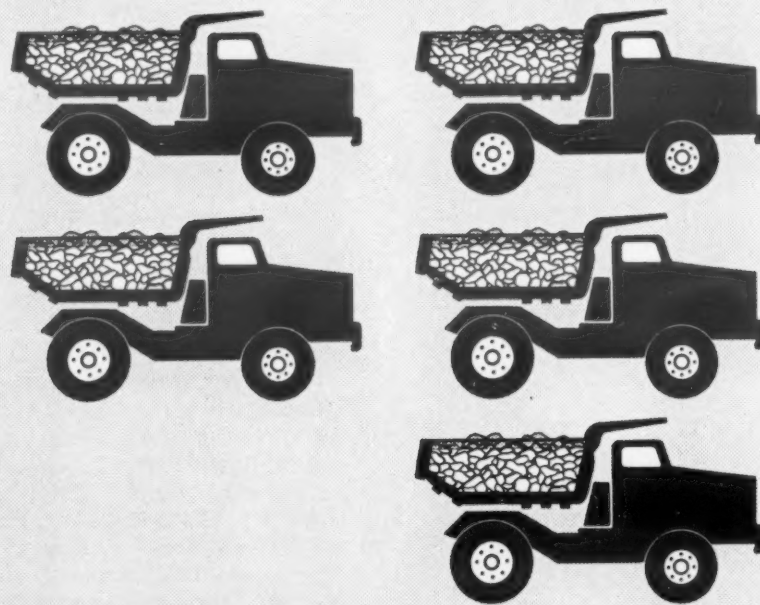
Opened on October 10, the new Southern Region depot for Continental perishables traffic at Hither Green provides a terminal of much greater capacity than that previously available for train ferry wagons; it is road connected for London distribution and conveniently adjacent to Hither Green marshalling yard for wagons consigned elsewhere in Britain. The shed is 1,000 ft. long and 150 ft. wide and accommodates 25 to 30 long wheelbase Continental wagons on each of two roads. About 150 railway and 10 Customs staff will handle 200,000 tons a year



### FLEET A

6 DUMPERS

TOTAL UNLADEN WEIGHT: 66 TONS • 6 CWT  
TOTAL PAYLOAD CAPACITY: 60 TONS



### FLEET B

5 DUMPERS

TOTAL UNLADEN WEIGHT: 45 TONS • 15 CWT  
TOTAL PAYLOAD CAPACITY: 60 TONS

## How?

The aluminium fleet, with one less dumper, and using lighter vehicles, carries the same payload as the steel fleet. How?

An aluminium body is only half the weight of a comparable steel body. What it saves you in weight you can take on in payload.

The aluminium bodies—above right—are 20% bigger than the steel bodies at left—yet they are each nearly two tons lighter.

So, because the aluminium bodies are bigger you can carry about 2 extra cu. yards of payload without investing in a heavier chassis.

That's only the beginning of your savings...

With aluminium dumpers, you need about one vehicle less for every six steel dumpers you now operate. That's one vehicle less tying up your capital. One driver less on your payroll. One vehicle less to be insured and taxed, fuelled and maintained. One vehicle less when you're working in the crowded conditions of a restricted site.

Because they're lighter, these dumpers use a great deal less fuel and tyres too—especially when empty. In addition, rust can never weaken an aluminium body. Aluminium doesn't rust.

True, an aluminium dumper costs more initially, but, for all these reasons, you soon get your money back several times over.

Why not look into it more fully? Write to Alcan (U.K.) Limited, 30 Berkeley Square, London, W.1. Telephone: Mayfair 9721.

**ALCAN ALUMINIUM**  
ALCAN ALUMINIUM LIMITED OF CANADA  
Britain's most widely used aluminium



# ELECTRIFICATION CONFERENCE

*Valuable Exchanges of Ideas*

## FINE DISPLAYS BY MANUFACTURERS

WHERE all were on such a high level it would be hard to single out any one feature of the British Railways Electrification Conference as completely outstanding. There were valuable exchanges of ideas both in the sessions and outside them; the exhibition at Battersea highlighted the new motive power equipment, but also enabled the manufacturers to display their wares in engaging manner; the smoothly organised visits to installations on the London Midland and Eastern Regions enabled detailed surveys to be made of supply, control and overhead equipment as well as of locomotives, multiple-unit rolling stock and maintenance methods and, for those concerned with signalling equipment, the latest apparatus for controlling trains under the intense service conditions which apply in Britain; above all, the social

The second point was the considerable achievement of having nearly 400 multiple-unit train equipments available for service today, whereas there were only two less than five years ago. Some of the equipments had already had 18 months' service in traffic, giving very few troubles despite the compromises in their layout in the stock in which they have been mounted. The locomotives were expected to bear comparison with those built elsewhere and the broad basis of their designs would, it was hoped, enable a wise judgment to be formed when ordering the future standard a.c. locomotive. "Development and research are going hand in hand," declared Mr. Bond. Electronic control of power held out great prospects for simplifying equipment and thus reducing first cost and running costs.



The British Railways electrification exhibition: The Westinghouse stand, on which a model of a 25,000-volt locomotive moving on a signalled section of track was an object of great interest; right, Mr. Ernest Marples, Minister of Transport, on the G.E.C. stand with Sir Leslie Gamage, chairman of G.E.C., and Mr. F. L. Castle, managing director, Siemens and General Electric Railway Signal Company

occasions should have shown any friends from overseas who still believe old canards that the British can be bonhomous and friendly.

### Two-Way Traffic

Aptly summing-up the discussions at the conference, Mr. R. C. Bond, technical adviser, British Transport Commission, said that the officers of British Railways had something of technical interest to give to railway friends throughout the world; equally important was that they had much to gain from their guests, both in the formal sessions and perhaps even more so in the informal discussions which they had had. Science had no frontiers and they had been gratified at the wide representation among delegates. The conference had its commercial implications as was implicit from the fact that it was a joint conference organised by B.T.C., B.E.A.M.A. and L.A.M.A. This country had to live by its exports and it was hoped that what delegates had seen would encourage the placing of contracts for railway equipment here and to its general improvement by encouraging rivalry between exporting countries, many of whom they had been glad to welcome at the conference. They had all much to gain from exchange of views and constructive criticism.

### Great Progress

Three aspects of our electrification projects distinguished them from others. One was the concentrated network in this country and the

Thanks for the way in which the conference had been organised were expressed on behalf of the delegates by M. Camille Martin, rolling stock and motive power officer of the French National Railways; in his reply Mr. John Ratter, from the chair, thanked the 60 authors of papers for the valuable material presented and the others who had contributed to the success of the conference.

### Guildhall Dinner

The conference concluded with the dinner at the Guildhall given to delegates by the British Electrical and Allied Manufacturers' Association and the Locomotive and Allied Manufacturers' Association of Great Britain, and presided over by Viscount Chandos of Aldershot, president of the latter body. Lord Chandos proposed "The Lord Mayor and Corporation of London and the Sheriffs" and the Lord Mayor, Sir Edmund Stockdale, succinctly responded by pointing to the two-way traffic of such conferences, where we had much to learn from the visitors; he also indicated his pride in having been associated with the opening of the Travolator (see MODERN TRANSPORT of October 8).

Speaking to the toast, "International Co-operation," Mr. Reginald Maudling, M.P., President of the Board of Trade, said his department had a long connection with railways and the locomotive industry since his predecessor George Huskisson was killed in 1830 at the opening of the Liverpool and Manchester Railway. The opposite to



Other scenes at Battersea Wharf: Switchgear and Cowans display of switchgear; the Stone-Faiveley pantograph and intercoach couplers prominent on the stand of J. Stone and Co. (Deptford), Limited; below, Crompton Parkinson motors and Nalder Brothers and Thompson instrumentation and earth-proving supply switches

continuous service throughout the 24 hr. This made installation of fixed equipment for electrification complicated and relatively costly. The decision to adopt the 50-cycle high-voltage system after the announcement of the modernisation plan, with target dates close to the minimum possible, presented all departments with a formidable task. It was a courageous decision to change the system and retain the original dates against a very small background of experience—a task in which we were aided by our close contact with member railways of U.I.C. and O.R.E. and especially with the S.N.C.F. which was so closely associated with the new system. An important consequence of the planning and execution of the first electrification projects had been the establishment of harmonious relations between all departments concerned despite their sometimes conflicting interests; "if all goes well in the next few months we can take pride not only in a task accomplished but in the creation of conditions which will make the task of electrification of other lines much less arduous."

co-operation was co-destruction. Many wars had arisen from trading differences. Now he was sure it was the opposite—the more trade that flowed from one country to another the more opportunities for maintaining peace. There were happily signs of the will to lower trade barriers as well as recognition of the duty we owed less developed countries to enable them to catch up with the expansion of industry and the standard of living.

### Assistance

This involved financial and technical assistance. In all this, said Mr. Maudling, the railway industry had been a leader. Railwaymen were eager to ignore political barriers; a spirit of comradeship had been one of the great glories of their industry. The railway must continue to be important in opening up countries; the spread of knowledge by railwaymen working together was a practical example to all. He hoped the conference would be of great benefit to international co-operation as

(Continued on page 18)

# AEI DIESEL ELECTRIC POWER EQUIPMENTS



AEI are supplying no less than 176 power equipments incorporating Diesel Sulzer Engines for Type 2 Diesel Electric Locomotives being built by British Railways.

Enquiries to AEI Traction Division,  
Trafford Park, Manchester 17, or your local AEI Office



**Traction Division**  
**Associated Electrical Industries Ltd.**  
MANCHESTER · RUGBY · LONDON

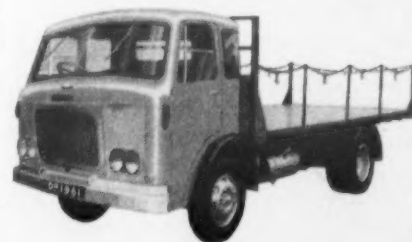
K/T014

## TWO NEW VEHICLES

# PAX IV

GOODS CHASSIS

- A craftsman built adaptable chassis for the medium weight range.
- Rationalised development of the well known PAX II and PAX III incorporating the latest refinements of years of experience in chassis design.
- Faster and safer, with improved braking system for modern highway conditions.
- All units easily accessible, reducing maintenance time to a minimum.
- All round visibility - one piece curved wide screen.
- Wide choice of specification. Improved restyled cab.



For details of these outstanding vehicles consult your nearest DENNIS distributor

## AND THE

# LOLINE MARK III

## LOW HEIGHT DOUBLE DECK BUS CHASSIS

- 27 ft. or 30 ft. long giving up to 76 seats
- Choice of engine and gearbox
- Air suspension on rear axle.
- Conventional positioning of chassis components.
- Full length centre gangways in both saloons
- Overall height of 13 ft. 4 in. but can be as low as 12 ft. 5 in.



**DENNIS**

FORWARD OR REAR ENTRANCE

**DENNIS BROS LTD**

**GUILDFORD**





## The HALLMARK of SUPERB BODYWORK

Representing all that is best in STYLE,  
QUALITY and SERVICE-ECONOMY  
in the design and construction  
of distinctive vehicle bodies.

We would appreciate the opportunity  
to quote for your requirements.

ACORN 0033



-by **STRACHANS** of course!

STRACHANS SUCCESSORS LTD, NORTH ACTON, LONDON, W.3

## THE HISTORY OF WAGONS-LITS

1875 - 1955

by  
**George Behrend, M.A., F.R.G.S.**

A new 32-page book, giving an excellent descriptive  
picture and historical background of this famous  
international company, covering a period of eighty  
years and containing 32 illustrations and line-drawings.

Price 3s. 6d.

Order your copy now from your bookseller or direct from the publisher.

**Modern Transport Publishing Co. Limited**

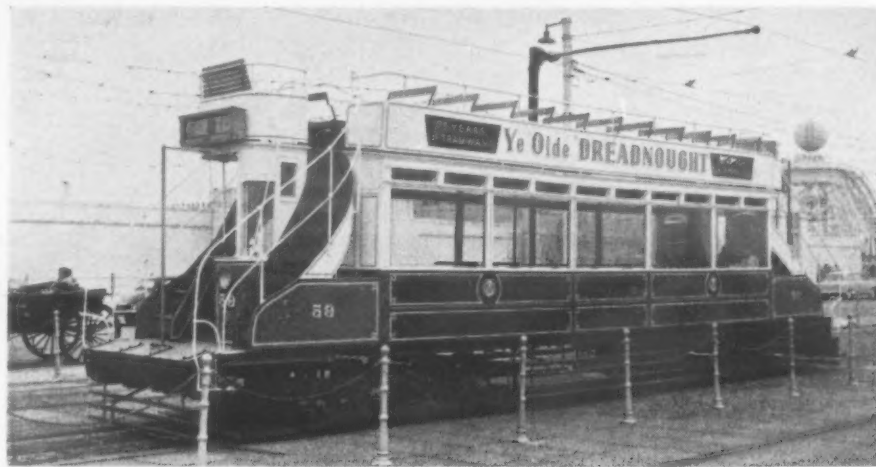
3-16 Woburn Place, London, W.C.1

## BLACKPOOL ANNIVERSARY

### 75 Years of Tramway Operation

TO mark 75 years of electric street tramway operation on September 29 Blackpool Corporation Transport has produced an attractive commemorative booklet giving the brief history of the system and illustrating representative cars. For the anniversary the undertaking

with single-deck electric rail coaches and covered-top double-deck cars which seat 84. There are some completely open cars for hot weather. Popular innovation is the coupled motor car and trailer outfit running as the "twin car," and recently described in our columns. The latest ver-



Most striking in appearance of the living tramway museum which has operated on the Promenade at Blackpool this summer is the end-loading Dreadnought 86-seat car built in 1901

recommissioned several historical relics. Among these was No. 1, an original 32-seat car from the electric conduit system laid by Holroyd Smith, which began operation in 1885. It appears to have cost £107—compared with £13,000 for each

sions of the trailer car theme have M.C.W. bodywork. Blackpool now has 164 cars in stock, operates 35 miles of track and runs 3½ million car-miles. Some 34 million passengers were carried by Blackpool trams in 1959. We are indebted to Mr. J. C.

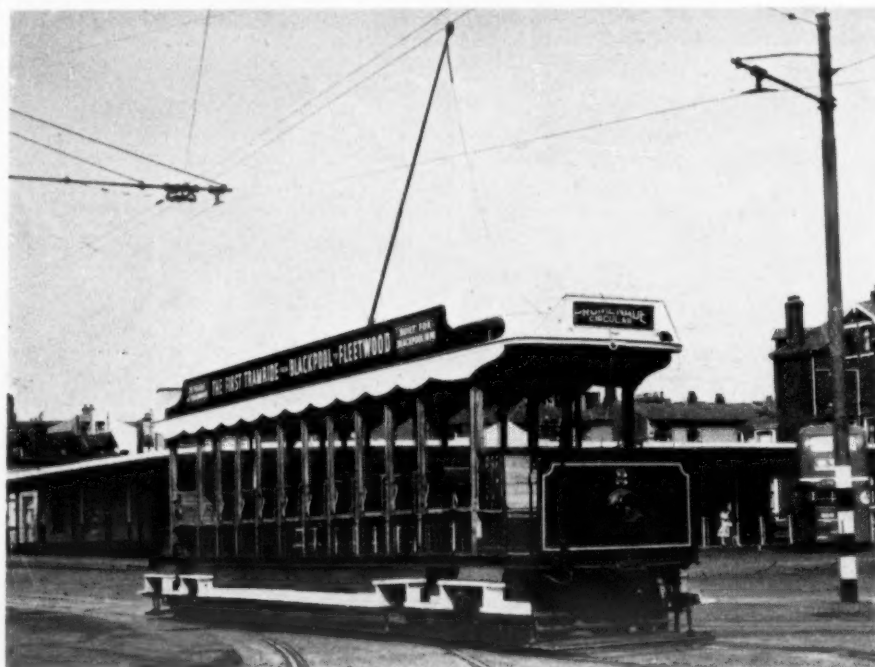


Refurbished for the 75th anniversary year of Blackpool tramways is No. 1, an original 32-seat car for the electric conduit system opened in 1885

Coronation type car. The short tramway along the Promenade was acquired by the Corporation in 1892 and was reconstructed for overhead operation in 1898. End-loading straight staircase cars, soon dubbed "Dreadnoughts," were operated and one of these, 59, survives and has worked through this summer. It is an 86-seater of 1901.

Under a Blackpool Act of 1919 the Blackpool

Franklin, general manager, Blackpool Corporation Transport Department, for the opportunity of reproducing the accompanying information and the photographs of the cars now running as Nos. 1 and 2. The undertaking is not only the electric tramway with the longest continuous history in Europe, but it is the one of the only two in England, the other being the peak-hours-only Grimsby and



Another of the recommissioned vehicles is this 56-seat toastrack car of 1898 operated originally by the Blackpool and Fleetwood Tramroad

and Fleetwood Tramroad, which had begun operation in 1898, was taken over in 1920. Two cars from this undertaking have been reconditioned for service and have given pleasure to visitors during recent months; one is a somewhat box-like 44-seat interurban car of 1914, but the other is a 56-seat toastrack, dating from the start in 1898.

Of recent years the stock has been modernised

Immingham Light Railway, to be operated by the Eastern Region until alternative road facilities are completed; it is, moreover, the only electric tramway in Great Britain for which there are no abandonment plans, since the Glasgow system is expected to cease operation in approximately two years' time. There is one other street tramway—that at Douglas, Isle of Man—but it is operated by horse traction in summer months only.



## PROMOTIONAL SEMI-TRAILER

### For Reed Paper Group

ONE of the interesting examples of specialist coachbuilding on exhibition at the recent Commercial Motor Show was an articulated display unit built for the packaging division of the Reed Paper Group by J. H. Sparshatt and Sons, Limited, Portsmouth. Designed in conjunction with Mr. Arthur C. Braven, A.R.I.B.A., M.S.I.A., to form a semi-permanent unit, an important object was to ensure that the unit is at an agricultural show, visiting a customer, or travelling along

to the unit when it is in use at a show or other function by fitting a canvas skirt round the trailer to conceal the wheels and so on.

At the front of the trailer there is a lounge with a large radiused window and a galley equipped with Calor gas hotplate, Astral Calor gas refrigerator, running water, sink and waste tank, and stowage for china, glass and cutlery. A fully equipped office at the rear is panelled in Decorplast; it includes a desk and built-in cupboards and has a separate



A Sparshatt semi-trailer built for Reed Paper Group provides 200 sq. ft. of display area with extension opened up, as well as an office and kitchen at the front end

the road, it is always a prestige advertisement for the operator.

In order to provide overall harmonised styling, modifications were made to the height and roof-line of the standard cab of the B.M.C. 8-ton diesel-engined Austin tractor, to which power-assisted steering was also fitted.

#### Display Area

Maximum display area is provided by the special design of the body, one side of which opens to form

door at the rear. Maximum flexibility of display facilities has been provided by the use of Spur fittings set at 1-ft. centres to support shelves. The positions of the shelves can be varied, or they can be removed entirely for displaying particularly heavy free-standing exhibits.

Both the suspended corrugated ceiling and the moulded plastics roof are translucent and admit a high degree of diffused daylight to the body. A 24-volt fluorescent lighting system can be operated from batteries on the vehicle or a mains supply fed



In road trim the outfit is drawn by an Austin diesel-engined 8-ton tractor modified externally to provide overall harmony of line

a roof, a drop-down extension floor, and side wings, providing a total exhibition area of nearly 200 sq. ft. The body is built of seasoned hardwood, reinforced on the nearside to accommodate the extension, and the interior is finished in contrasting Sapele slatting and sycamore panelling with lino tiles covering the floor. Access to the exhibition area is gained by detachable alloy steps extending the full length of this area. An appearance of permanency is given

through a transformer. A battery charger is mounted in a compartment at the rear of the tractor and switchgear, batteries and other equipment required for the lighting system are housed in a cupboard on the nearside of the semi-trailer.

The body is mounted on a Sparshatt 29-ft. drop-frame trailer equipped with vacuum servo brakes and connected to the tractor by a Taskers fifth-wheel quick-release coupling.

## The Science of Transport

(Continued from page 5)

appointing the best man to the job. Seniority is properly taken into account when, in all other respects, men are equal. Where they are not equal then we betray our industry and ourselves if we fail to pick the best and promote the promising youngster, just as fast as he is fit to take it.

To return to the Institute, its growth is certainly satisfactory, but greater numerical strength would enable it to push ahead more rapidly with, for example, the provision of facilities for the basic research which the industry and the community needs, and the publication of the results. I hope the leaders of the industry will keep this well in mind and think along the lines suggested by my earlier remarks. A strong Institute, embracing the majority of those engaged in transport and actively promoting the scientific study of the science of transport, would be of immense benefit to the industry and to the country.

#### Individual Responsibility

What do I expect from individual members? First, I would say, be proud of yourselves as transport men and as members of the Institute. Secondly, do all you can to promote amongst yourselves and your colleagues the scientific approach to the problems which beset us. If transport is a science it requires from us all that dispassionate, disciplined seeking after truth which, in the last 50 years at any rate, has generally distinguished the studies of the natural scientist. We need to build the same tradition which, for all the criticism which the non-scientists have levelled at the natural scientists, has earned for them their enviable reputation for scrupulous accuracy in the observation, classification and interpretation of facts. The natural scientist has been able in the past (he may be less able in the future) to steer clear of political passions to an extent to which we in transport have hitherto been unable. But the fact that in transport, questions of ownership and policy are bound up with politics and inevitably involve those of us whose livelihood transport is, need have no effect at all on the frame of mind and the care with which we study the problems, or the honesty and impartiality with which we report and discuss the results. It is not easy to be impartial, but we must make the attempt. Because it is not easy, it is all the more necessary for us to make it possible for much of the basic research to be carried out by those who are not involved in the

day-to-day business—by those who are not "committed" and who have been nurtured by their background of education and training in just that tradition of detached seeking after truth which is demanded. That is why the University appointments I have mentioned are so important. We who are involved in transport must still, however, strive after impartiality if we are ever to be able to recognise the truth when it is told to us.

#### Importance of Papers

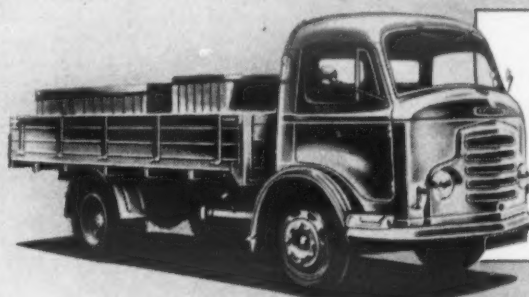
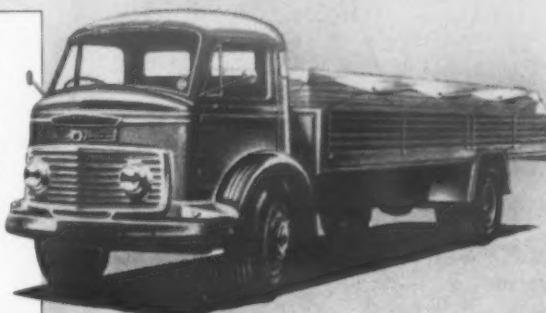
Thirdly, I would underline my predecessor's stimulating remarks on the writing of papers, reported in the *Journal* last May. Whatever schemes of scientific study the Institute may be able to evolve in the future, the material for research must be added to by those of us who, by daily contact with them, are in possession of the facts. The holding of meetings at which papers on transport are read and discussed will always remain for the Institute the most important way of carrying out its objects. The writing of papers is at the very heart of the scientific study of transport.

Finally, I expect something from Government. Scientific study can proceed only if the facts are available. Some sections of the transport industry in this country are obliged to publish detailed statistical information, but generally speaking the pool of statistical knowledge here compares unfavourably with that available in the United States. How can the true facts about transport be studied if, for example, next to nothing is known about whole sections of the industry, such as road haulage and coastwise shipping? This is largely a matter for Government whose central statistical services have improved greatly since the last war. I wonder, however, if the leaders of great enterprises need be so fearful of publishing more information voluntarily?

To sum up, I would say that our plans for the future should include pride in our calling, awareness that transport is a science as well as an art, and determination to promote and contribute to its study in all possible ways. This, of course, is exactly what our founders said in 1919. At the end of my address, I find—as my audience probably knew all along—that I had nothing new to say. I hope, however, that you will agree with me that after 40 years this pause for self-examination will have done no harm, and may have done some good.

## BUILT STRONGER TO LAST LONGER

THE universally acclaimed Commer range of petrol or diesel-engined vehicles offers the discriminating transport operator a wide choice of high-quality vehicles, from the small and attractive 'Cob' van to the massive 12 ton tractor-trailer.



THE Karrier range of specialised and well-proved municipal and industrial vehicles—petrol or diesel-engined—has for long enjoyed a world-wide reputation for unsurpassed value and long-lived reliability.

## COMMER · KARRIER

PETROL or DIESEL for loads up to 12 tons

BACKED BY ROUTES COUNTRY-WIDE PARTS & SERVICE ORGANISATION

COMMER CARS LTD. KARRIER MOTORS LTD. LUTON. BEDFORDSHIRE

EXPORT DIVISION: DEVONSHIRE HOUSE, PICCADILLY, LONDON, W.1



### Dual-purpose ALL-TRACTION

For all-round fitment, giving better performance and cutting costs in on-and-off-the-road hauling. Deeper tread gives longer non-skid mileage. Tough, rugged shoulder bars give extra traction off the road and continuous centre ribs ensure long even wear on the road. Tension-Dried Gum-Dipped cord for super-strength body.

## Firestone

Best on the road... and off

### Dual-purpose SUPER MILEAGE LUG

For rear wheel fitment. Outpulls and outlasts any tyre of its kind. Specially designed dual-purpose non-directional traction tyre for use where off-the-road service is frequent and severe. Power Bite Traction design, with cross grooves, heavy shoulder lugs and circumferential ribbing, gives maximum pulling-power and performance. Tension-Dried Gum-Dipped cord for super-strength body.

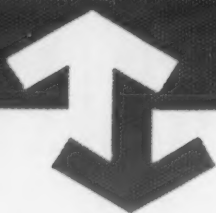
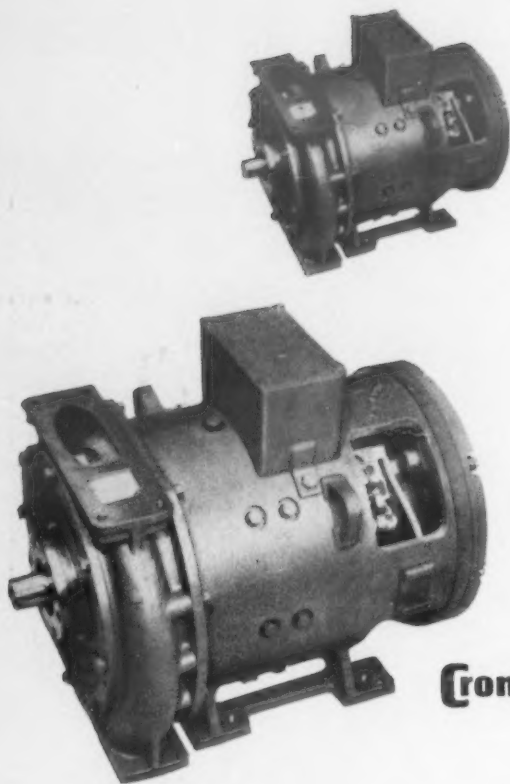
#### EXPERIENCE COUNTS

45 Factories throughout the world.  
Firestone total sales exceed £1,000,000 per day.





DESIGNING

AND MAKING  
TRACTION EQUIPMENT

You, as an engineer, know that there can be no sharp dividing line between designing and building. A good design incorporates experience gained in making, testing and commissioning similar equipment in the past. And, of course, it is also shaped by the experience of all sorts of people using the earlier designs under a variety of conditions that could not be simulated in any test laboratory.

To a long-established company such as Crompton Parkinson this process of feedback of information to the designer is fundamental. In traction equipment, where space and weight must be kept down and yet robustness and accessibility are a premium, it shows up in the simplicity and elegance with which these conflicting demands are reconciled. As, for example, by the special design of the ventilation of this railway compressor motor. The air circuit is continued by trunking to serve the compressor and its intercooler as well. In this design we were able to make direct use of the experience we had gained with earlier auxiliary motors—as well as more indirectly from hundreds of equipments built for main line locomotives, shunters, motor coaches and trolley buses.

**Crompton Parkinson**

Traction Division, Chelmsford, Essex.  
Telephone: Chelmsford 3161.  
Telegrams & Cables: Crompton Chelmsford.

Makers of Electric Motors of all kinds, A.C. and D.C. Generators, Switchgear, B.E.T. Transformers, Cables, Instruments, Lamps, Lighting Equipment, Batteries, Stud Welding Equipment, Traction Equipment, Ceiling Fans.

**FROM BREWERY TO SILO***Mechanised Delivery of Wet Grain*

BY the introduction of mechanisation a valuable new service for the speedy and efficient delivery of wet grains from brewer to farmer has recently been inaugurated by English Grains Co., Limited, Burton-on-Trent—the largest suppliers of wet grains in the whole of the Midlands. Brewers' wet grains, rich in protein, oil and carbo-

heights by means of a rear-mounted swinging jib. The conveyor and elevator are powered from the vehicle's diesel engine.

About 40 min. is needed to discharge a full load of 500 bushels of wet grains into the silo. The operation is completely mechanised; no manual labour whatever is required for the actual off-



Albion Chieftain with tanker body by Charrold discharging wet grains into a Trent silo on a farm near Ashby-de-la-Zouch

hydrates, are a valuable food for cattle. They are cheaper to buy in the summer months, when beer production is at its highest, the object of the new facilities is that the grains can be bought in bulk when at their cheapest and stored for subsequent winter feeding to cattle.

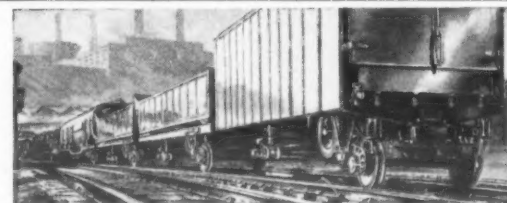
To solve the problem of storage, prefabricated concrete silos—holding 1,250 or 2,500 bushels of wet grains—are being marketed by the Trent Building and Industrial Maintenance Co., Limited, of Burton-on-Trent. Under normal circumstances a farmer can obtain a Ministry subsidy for 50 per cent of the purchase price of these easily erected units. To provide an "automatic" delivery service to the farmer English Grains has introduced a bulk road tank vehicle—first of a potential fleet—which has been specially adapted to load or unload the commodity quickly and efficiently without the use of manual labour.

**Special Body**

Fundamentally this tanker is an Albion 94 b.h.p. Chieftain model CH3AL. The body has been specially designed for the mechanised handling of wet grains by Charrold, Limited, London, E.C.3. The shell is constructed in aluminium and has a capacity of about 500 bushels. A conveyor is built into the floor of the hopper body which discharges the wet grains through a rear-outlet on to an extension elevator which is stowed in the off-side of the vehicle when not in use. This elevator may be swung either side or adjusted for various discharge

loading. The wet grains can thus be purchased during the summer and ensiled for winter feeding when the price is higher.

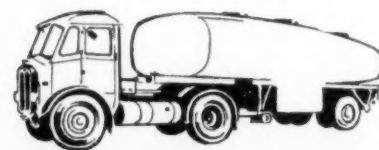
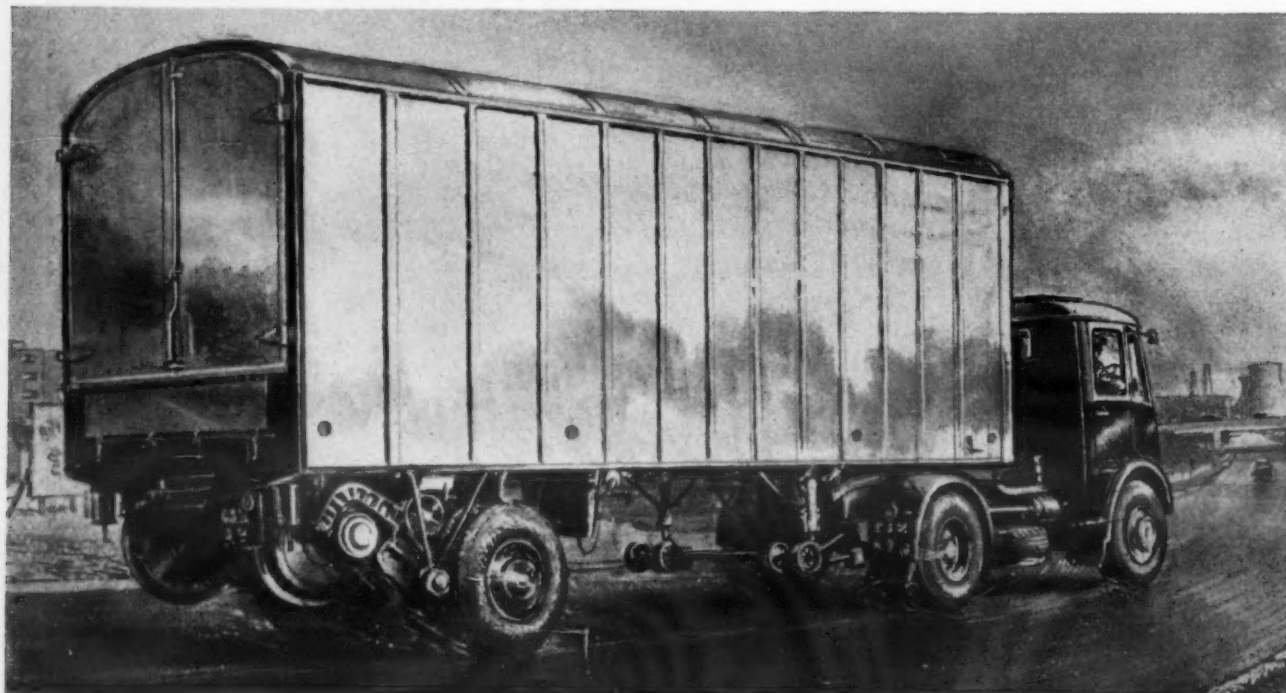
The Minister of Transport announced last week that he had authorised the Lancashire County Council, acting as his agent, to reinstate tenders for the construction of the 26-mile length of the Birmingham—Preston Motorway between Preston and Warrington. It is hoped to start construction early in 1961. Invitations to tender for the two contracts covering this section were originally issued earlier this year, but the average cost per mile in the lowest tenders proved higher than for sections of motorway elsewhere. The Minister arranged for a review to be carried out of the particulars of the contract documents to see if savings could be made without departing from the basic specification. This review, which was undertaken jointly by officers of the Ministry, the Road Research Laboratory and the county council, has now been completed. Agreed modifications should make possible a substantial reduction in the cost of the finished motorway without any reduction in standards. To allow for the difficult soil conditions and the more than usually uncertain weather which may be met in Lancashire, the Minister has decided that the contract period shall be 28 months. Construction of the remaining part of the motorway from Dunston (just north of Birmingham) to the Lancashire boundary will be phased to fit this timetable.



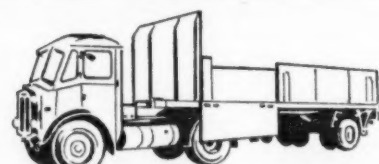
Make your door-to-door  
transport service more profitable  
with the new ROADRAILER

The Roadrailer, jointly developed by Pressed Steel Company and British Transport Commission, and made by the Pressed Steel Company, is a door-to-door form of freight carrier completely new to Britain. It is a combined road/rail vehicle with road wheels and rail wheels which can be interchanged in moments. It has its own traction unit, so that you can use it on the road as a van, or as a tanker, a tipper, or a flat truck with detachable sides. Put its rail wheels down, and it can become part of a freight train. The Roadrailer is designed for use with existing heavy duty prime-mover vehicles.

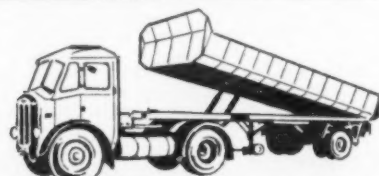
The Roadrailer has combined the advantages of the railway's cheapness and speed for the long hauls; and you can run your freight straight into the unloading bays of its destination without the inconvenience and expense of intermediate handling. This makes possible—and profitable—an overnight service to any part of the country.



A Roadrailer Tanker



A Roadrailer Flat Truck



A Roadrailer Tipper Truck

PRESSED STEEL COMPANY LIMITED RAILWAY DIVISION, LINWOOD FACTORY, PAISLEY, SCOTLAND. LONDON OFFICE: RAILWAY DIVISION, 47 VICTORIA STREET, LONDON, SW1. HEAD OFFICE: COWLEY, OXFORD. BRUSSELS OFFICE: CANTERSTEEN 7, GALERIE RAVENSTEIN 30, BRUSSELS 1, BELGIUM. Manufacturers also of motor car bodies, Prestcold refrigeration equipment and pressings of all kinds.



## R.H.A. CONFERENCE

### Good Housekeeping Resolutions

#### TALK OF A RATES RECOMMENDATION

IF there is a crisis in the transport industry, it is confined to the railway sector, said Mr. J. B. Mitchell, newly-elected chairman of the Road Haulage Association, in his introductory remarks at its annual conference in Blackpool this week. Speaking on Tuesday morning before the discussion of resolutions got under way, Mr. Mitchell said the present-day attitude of the association was calm and practical, but not at all complacent. This was because, while the aspirations of the nationalists had received a setback, other threats were developing. Chief of these, he thought, was the antipathy that the lorry was arousing.

It was true that in well-informed circles the lorry was variously and properly described as a machine tool of industry or as industry's conveyor belt. But it was also regarded more widely and simply as a nuisance. Motorists considered the lorry a nuisance even though they recognised the deservedly high reputation for skill and courtesy which had been earned by lorry drivers and which many private motorists could with advantage emulate. Then, some people suspected, and irresponsible press articles suggested, that diesel fumes were a danger to health, ignoring authoritative medical opinion to the contrary and entirely overlooking the fact that the fumes from private cars were toxic.

#### Ministry of Transport Attitudes

On the problem of diesel smoke as a source of air pollution the association's attitude was certainly not unco-operative. Through the National Road Transport Federation they had held consultations with the S.M.M.T., one result of which had been a proposal by the Ministry that the excess fuel device be inaccessible to the driver from his cab. Then, too, the Ministry of Transport was inconsistent in its attitude towards goods vehicles. We were told that major road improvements were made primarily for the purpose of facilitating the carriage of goods, but regulations were nevertheless proposed in further restriction of the carriage of certain loads and of the use of certain vehicles, and greater powers were given to local authorities to prevent vehicles from loading and unloading.

Finally, there was the clamour for the compulsory or artificial diversion of traffic from road to rail. It was made by theorists who were quite unaware of the small capacity of the railways to relieve road congestion and by theorists who themselves, significantly, had no goods to transport. Thus, instead of the heavy direct attack of the nationalists they were having to resist a gradual and insidious encircling movement which was being carried out by many different and often unidentifiable forces.

#### Search for Realism

Four of the five resolutions dealt with on Tuesday morning were aimed at more realistic vehicle operating or licensing requirements in line with current trends, and with the light-heavyweight four-wheeler carrying 7 to 9 tons particularly in mind. However, a resolution from the North Western Area proposing that the system of signifying vehicles by registration number and unladen weight be abolished and that carriers' licences should specify vehicles in various categories found no support. Mr. J. Holden (Manchester) said that he did not visualise an operator being able to increase his unladen weight considerably; it would simply allow a certain leeway, without gaining or leaving much in the way of unladen weight. The vehicle identity disc would indicate a certain category and not a particular unladen weight. It would also show whether the vehicle was flat platform, a tipper, a tanker, or so on, and thus would not allow an operator to change the class of vehicle he was operating. He asked that the resolution should not be judged on the finer points but on whether the principle was right or wrong. At the moment an operator replacing a vehicle was tied to the narrow concept of unladen weight, rather than the most suitable vehicle for the task. Mr. F. C. Harfoot (Cardiff) said that if they were looking for a simplification of regulations, this resolution would not help them and it was on that note that it was lost.

A resolution was carried calling for statutory display on all goods vehicles of the owner's name and the carrier's licence particularly as a deterrent to abuse and as means of more easy identification of suspect transgressors. Mr. I. Raybould (Leicester) proposing, said that the East Midlands area licence transgressors could more appropriately be termed aggressors. They used nondescript vehicles with no identification. The resolution, he urged, covered economic, safety and welfare aspects.

#### For and Against Plating

There was prolonged discussion of the proposal that vehicle carrying capacities be brought into direct relationship to unladen weights. It was suggested that this might be done in the light of recent commercial vehicle development which warranted that carrying capacity should vary directly with unladen weight. This of course impinged on the question of plating, which the S.M.M.T. has just proposed. The present policy of the R.H.A. with regard to plating, says the chairman, cannot be formulated until any proposals of the Ministry of Transport are made known. At present the view is that the practical difficulties involving plating would be enormous.

Proposing the resolution, Mr. G. W. Mousley (Coventry) said that several resolutions on this theme had been submitted at past conferences. He had principally in mind the four-wheeler, but some axle loadings could be increased and some reduced. With all the technical difficulties in vehicle design, particularly specialised bodywork, the haulier investing in a quality machine should, he thought, be given heavier axle weights. From what he said it appeared that sensible gross weight would eliminate the menace of over-loading. Mr. F. E. Russett (Bristol) said that without legislation there would be only a half-hearted observance of any reduction of carrying capacities. It was left to Mr. R. Cropper (London) to point out that the resolution was absurd as it stood since carrying capacity could not bear a fixed relationship to unladen weight throughout the range of commercial vehicles. He instanced small vans, the unladen weight of which was double the capacity. Mr. R. N. Ingram (Birmingham) said there was obvious support from the conference for some sort

of relationship between carrying capacity and the capability of the vehicle, if not the unladen weight. Plating had been advised by the S.M.M.T. to the M.O.T.; he warned that there was the risk that any resolution they passed might be read as giving implicit support to plating. He was not against plating in principle. The motion was carried.

#### The Age of Drivers

The Northern Area wanted the classification of heavy motor-cars to be raised from 3 tons to 4 tons unladen weight. The object of this, as explained by the proposer and seconder, was that with the increase in vehicles of between 3 and 4 tons unladen, the opportunities for drivers under 21 to graduate easily to the heavy motor-car type of vehicle were reduced. There was now some chance that they might go straight from a vehicle weighing less than 3 tons unladen straight to an eight-wheeler without adequate experience. The aim was to give these young men some intermediate experience before they graduated to the heavy vehicle.

The general feeling was against this move. Mr. Harfoot put it that employers did not want rock-and-roll teenagers to get on to any heavier vehicles than they were entitled to drive at the moment. His experience was that insurance companies were now asking employers how many drivers they had, not under 21, but over 25. Moreover, the union might represent it as an attempt to introduce cheaper labour. Mr. D. H. McVeigh (Grimsby) referred to accident-prone single young drivers. He would deplore any extension of the range of vehicles they could drive.

Manufacturers of cab heaters will be disappointed to hear that the association is generally quite content to have them as optional extras rather than standard equipment on diesel vehicles. This was after the conference had heard Mr. T. W. Jackson (Hull) say that in two recent accidents in his area it was suggested that heaters could be to blame and a Stoke on Trent owner-driver, Mr. J. Morris, who got a laugh when he said he would rather wear a pair of bicycle clips.

#### The B.R.S. Bogey

An hour of Tuesday afternoon was devoted to an open discussion of the future of road haulage. It was turned into an opportunity to ride that old hobby horse, the complete denationalisation of British Road Services. This is still a powerful rallying call in some sections of R.H.A. and, whenever it is aired, reason seems to fly out of the window. We were told that the entire future of road haulage was bound up in a successful conclusion of this operation, the more so since at the Labour conference this year the renationalisation of road haulage was reaffirmed. The theme was again that the sales of B.R.S. vehicles only dried up in 1955 because of the imminence of a general election. It was not as though B.R.S. made large profits, said the opening speaker, Mr. G. C. Goodier, who comes from Preston. He was particularly incensed about what he called "renationalisation by purchase" and he was not worried about the prospect that some R.H.A. members might be deprived of the best price for their businesses. In fact he seemed to overlook that some if not all of these few transactions were voluntary. Just for the record Mr. R. S. Heaton (St. Helens) laid down a programme. He wanted all B.R.S. depots which were losing money—and there were many, including St. Helens, he declared—to be closed down immediately. After our modernised railways had taken their share of B.R.S. traffic, independent hauliers could do the rest and remaining B.R.S. depots could then close down. The speaker did not distinguish parcels, heavy haulage and other specialised traffics; the basic thing was to carry out the electoral mandate.

Mr. R. B. Brittain (South Benfleet) injected a note of reason into the discussion. He said he wanted to speak about costs and rates. Since the last recommendation of a rates increase there had been two wage increases and the third was now imminent; incidentally, it was well known that when drivers' wages went up there was a general increase throughout the organisation—offices, bank staff, etc. Moreover, the basic 10s. 6d. per week just proposed meant 15s. with overtime. Scores of his friends in the industry were already in the red or near it, said Mr. Brittain. (On October 18 the rates committee of the Association meets and may make a decision on a recommended increase.) B.R.S. was a fair competitor and politics did not enter into it; it was now just a large operator working at fair rates. "If we do not get a substantial increase in rates soon there will be no need to debate the future of road haulage because there won't be any future," concluded Mr. Brittain.

#### Treated Honourably

Support came from Mr. Harfoot, who said he had had experiences in both camps. It would be completely wrong for him to say that he could support complete denationalisation. In his dealings he had been treated honourably and paid promptly with B.R.S. It had maintained a dignified attitude in rates approaches to customers. The alternative might be very much worse for them. Free hauliers had often rattled on rates agreements. If there were to be total denationalisation he would want a guarantee that the vehicles did not get into the hands of rate cutters. From the top table Mr. Ingram was diplomatic. If the pressure was really as strong in the areas as speeches had suggested they would have no hesitation in pressing the Minister, but it had been tacitly agreed that, for the time being at all events, the railways and not B.R.S. were their greatest competitor. Of course, they must in principle be opposed to any nationalised participant in the industry.

There were two resolutions before the conference on delays to vehicles caused by unloading restrictions or the inadequacy of customers' reception arrangements. The first asked for the co-operation of traders in extending facilities for collection and delivery so that these could be undertaken more frequently at times other than those during which loading and unloading restrictions were in force. Mr. P. H. R. Turner (London), proposing, said that the customer, i.e. the consignee, was right to the detriment of the general public. If things went on in the same way the cost of deliveries would go up out of all proportion. During the Pink Zone experiment last Christmas his experience was that 30 per cent more vehicles were needed to complete deliveries in the area before the deadline of 1 p.m.

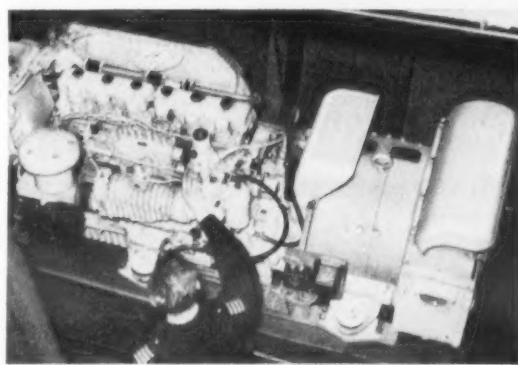
(Continued on page 18)



on land and sea

**Foden**

meets the need  
for power



This Foden FE6/24 eight-wheeled wagon, operated by Messrs. Fraser Brothers of Greenock, is powered by a 6 cylinder 150 B.H.P. Foden two-stroke oil engine. In the background is the vessel "Lairdsburn," owned by the Burns and Laird Line. The vessel is equipped with a Foden 6 cylinder two-stroke oil engine, precisely similar to the engine fitted in the eight-wheeler seen in the foreground. It drives a 60 KW Generator which supplies all the power for the ship's steering, derricks, lighting and heating.

See our Exhibits on STAND 83  
PUBLIC WORKS EXHIBITION  
OLYMPIA Nov. 14th-19th

FODENS LIMITED ELWORTH WORKS SANDBACH CHESHIRE

Phone: Sandbach 644 (12 lines) Grams: 'Fodenway' Sandbach. London Sales Office: 139 Park Lane, W.1. Phone: Grosvenor 5932

## WAY AHEAD!

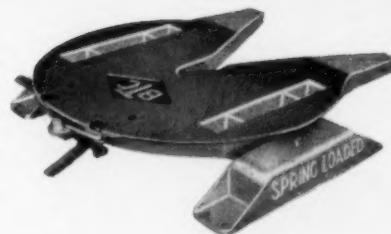
Fit the BTC/SAE Automatic Coupling to your Tractor and pull your loads over all roads with perfect confidence and safety.

Spring Loaded fore and aft to cushion starting and stopping strains (also eliminates Jack Knifing). Double action safety locking jaws. Large Diameter Single Piece Casting.



Positive, Safe, Single-handed release action. Full width large diameter Cross-shaft. Can be fitted to any make of Popular Type Truck.

Makers of Articulated Couplings since 1928, BTC fitted the common agreed standard trailer King Pin (SAE) in 1945, and since adopted as universal Standard (S.M.M.T.—No. 37).



## BRITISH TRAILER COMPANY LIMITED

HEAD OFFICE:  
MANCHESTER  
Phoenix Works,  
Richmond Road,  
TRAFFORD PARK,  
MANCHESTER, 17  
Tel.: TRAFFORD Park 0865  
Telex 66-250  
Grams: TRUNKANTRAK,  
Manchester, Telex

LONDON:  
39 Charterhouse Square  
LONDON, E.C.1.  
Tel.: MONarch 4270 and 4279  
Telex 23184  
Service Depot: 198 Acton  
Lane, London, N.W.10.

LIVERPOOL:  
Graham Works,  
KIRKBY TRADING  
ESTATE, LIVERPOOL.  
Tel.: Simonswood 2126.  
Grams: TRUNKANTRAK,  
Liverpool.

AREA OFFICES:  
GLASGOW  
BIRMINGHAM  
LEEDS  
BRISTOL



## R.H.A. Conference

(Continued from page 17)

He would prefer that consignees should expedite acceptance rather than that the hours of delivery should be extended. Mr. J. Adcock (London) thought the problem was extending to less congested areas, where there were public complaints of vehicles having to wait outside premises which had insufficient accommodation for them.

### Waiting Time

An examination of the problem of waiting time in industry was called for by Mr. T. Atkin (Dumfries), who referred particularly to the effect of the shorter working week in industry. Industry, he said, had set about producing the goods in fewer working hours with all sorts of productivity schemes to help bring these about. Hauliers were alive to the need to embody these as far as they could but no productivity committee could help one to shorten the running time for a 15-ton vehicle over 200 miles. The driver, of course, might have some ideas but so did others.

Costs were piling up with industry, shortening the time for collection and delivery. Requests were made for goods to be loaded by early afternoon; they met the requests, but it cost more. If the attitude of customers was queried, the reply was: "Well there is always someone else to do the job." He suggested that instead customers could make a contribution to keeping costs down and thereby help themselves. A broadening of the collection and delivery period, he pointed out, would cut down the number of applications for additional collection and general vehicles.

### Clearing Houses

The one resolution this year concerning clearing houses asked that a standard form should be handed to the driver obtaining a load from a clearing house. On it should be entered the rate and details of the job. Mr. Harfoot urged that the rate shown must be the gross paid by the customer and the discount should also be indicated.

There was a warm welcome for the proposal by Mr. J. Barrie (Glasgow) for a national benevolent fund for the benefit of employers and employees in the industry. Its particular purpose would be the meeting of exigencies. As an indication, a levy of 1s. per vehicle per annum would, on 100,000 vehicles, bring in £5,000; £1 per member on 17,000 members would bring in £17,000. Even that was only a modest proposal and they could easily do

better. The seconder, Mr. H. Bell (Edinburgh) noted that the M.A.A. and the N.A.F.W.R. had similar funds.

Sympathetic discussion but no action resulted on a West Midland area resolution urging more enforcement of licensing, drivers' hours, and overloading. They were the tools in trade of the rate cutter, said Mr. N. Cartwright, and a blight on the face of the industry. It was not pressed after Mr. Harfoot had pointed out that the contraventions were already being dealt with at area level and the Ministry of Transport had recently been approached. This approach was particularly directed at the use of unlicensed vehicles at a South Wales building site. The Road Haulage Association conference is next year to be held at Brighton.

The Transport Golfing Society (London Area) organised on the occasion of the Commercial Motor Show a most enjoyable morning's golf with an attendance of 78 people. The six areas of the society were represented by six members from each area in an inter-team match. The remaining members took part in a four ball best ball Stapleford competition on the ladies' course. The team match was won by the Scottish team with a net score of 466 and the runner-up was the South Wales and Monmouthshire team with a net score of 474. Winners of the Stapleford competition were Messrs. W. Randal and G. Caithness with W. E. Wilson and J. Stanley as runners-up.

Mr. H. W. Mills, who is at present assistant general manager and traffic manager of Wilts and Dorset Motor Services, Limited, has been appointed director and general manager of the Southern Vectis Omnibus Co., Limited, and will take up his new duties in the near future. Mr. Mills started his career in passenger road transport in 1927 as a trainee with the Birmingham and Midland Motor Omnibus Co., Limited. In 1931 he was appointed a depot manager with Crosville Motor Services, Limited, and in 1945 became assistant traffic manager of Eastern National Omnibus Co., Limited. In 1948 he was appointed traffic manager of Brighton, Hove and District Omnibus Co., Limited. He was appointed to his present company, Wilts and Dorset, in April, 1953, as traffic manager and was also appointed assistant general manager of that company in 1955.

## FORTHCOMING EVENTS

- October 16.—O.S. Visit to Blackburn Corporation Transport.  
L.R.T.L. Tour of Blackpool tramways.  
October 17.—H.M.R.S. A. W. H. Pearsall, "The (Little) North Western Railway." Kean House, Calshot Street, N.1. 7 p.m.  
Inst. Nav. Dr. Eric Axelsson, "Henry the Navigator and the Sea Route to India." 1 Kensington Gore, S.W.7. 8.30 p.m.  
Inst. T. (Sussex), S. Rawlings Smith, "The Work of Trinity House and its Contribution to Safety at Sea." Arlington Hotel, Brighton. 6.30 p.m.  
October 18.—I. Loco. E. W. J. A. Sykes, "The Operating Experience of the Diesel-Electric Train Sets on the Hastings Service." 1 Birdcage Walk, S.W.1. 5.30 p.m.  
Inst. T. (York G. and S.), R. A. Bell, "The Port of Manchester." Room 33, Railways H.Q. Offices, York. 7.15 p.m.  
Inst. T. (Birmingham G. and S.), E. W. Waine, "Road Transport from a Private Haulier's Point of View." Engineering Centre, Stephenson Place, Birmingham. 2. 6.45 p.m.  
Inst. T. (North Staffs.), A. Lewis, "Telecommunication." Grand Hotel, Hanley. 6.30 p.m.  
Inst. T. (Visual Aids), 80 Portland Place, W.1. Films. 6.15 p.m.  
Inst. T. (North Western), Leslie G. Norman, "Medical Aspects of Road Safety." Gass Service Centre, Manchester. 6.15 p.m.  
Inst. T. (Scottish), A. T. Irving, "Heavy Haulage Operation." North British Hotel, Edinburgh. 6 p.m.  
October 19.—Rly S.A. Presidential address by J. R. Hammond. London School of Economics, Houghton Street, W.1. 5.45 for 6.30 p.m.  
E.R.S. G. Dow, "British Railways in Transition." Engineering Centre, Stephenson Place, Birmingham. 2. 7.15 p.m.  
Inst. T. (Humber-side), T. H. Thornton, "British Waterways Expansion and Development in the North Eastern Division." Chamber of Commerce and Shipping, Samman House, Bowalley Lane, Hull. 6 p.m.  
October 19-20.—International Motor Show. At Earls Court.  
October 20.—I.R.S.E. W. Woodhouse, "Putney Line Programme Machines." I.E.E. Savoy Place, W.C.2. 6 p.m.  
Inst. T. (East Midlands), S. Rawlings Smith, "The Work of Trinity House and its Contribution to Safety at Sea." Co-operative Society's Elizabethan Restaurant, Nottingham. 1 p.m.  
Inst. T. (Northern Ireland), W. H. Vine, "The Shop Front of Transport." Grosvenor Rooms, Great Victoria Street, Belfast. 6 p.m.  
October 21.—Inst. T. (South Wales and Mon.), Martin Brown, "Demand Prospects for Freight Transport by Rail and Road." Angel Hotel, Cardiff. 7.15 p.m.  
Inst. T. (Teesside), L. N. Brocklehurst, "The United Automobile Services Contribution to Teesside Transport." Cleveland Scientific and Technical Institution, Middlesbrough. 6.30 p.m.

The Tilling Group of bus companies has announced that Mr. W. G. Hall, traffic manager, Eastern Counties Omnibus Co. Limited, has been appointed assistant general manager of that company with effect from September 1. His new appointment is additional to the position of traffic manager which he retains. Mr. Hall commenced his transport services as traffic assistant with Thomas Tilling Limited, in 1918. In 1926 he was appointed assistant traffic manager, West Yorkshire Road Car Co. Limited, and in 1936 became traffic manager of Eastern Counties.

## RAILWAY CONFERENCE

(Continued from page 13)

well as to British exports. We had come later than some countries to the field of main-line railway electrification—that was not always a disadvantage since one could learn from the experience of others and profit by their mistakes. On this occasion we hoped to be able to show what we had learned and what we could teach. He was glad of the experience of the United Kingdom Railway Advisory Service and glad that the next president of the International Union of Railways was to be Mr. John Ratter, a member of the British Transport Commission.

Before replying to Mr. Maudling, Monsieur Dargeou, vice-president of the International Union of Railways and director-general of the French National Railways, expressed the gratitude of the guests to the chairman of the British Transport Commission and to the British manufacturers' associations for the cordial welcome extended to them. Dealing with the toast he said that the aptitude for co-operation in the international field is an original and permanent feature of the family of railwaymen. This aptitude probably stems from the fact that the railway was the first means of overland transport to reach such speeds that the frontiers of States were found to enclose too confined a space. As far back as 1834 in France the protagonists of the railway gave themselves the mission of seeking out "the best way of reuniting the three kingdoms of England, Belgium and France."

### Changing Geography

Indeed, he continued, the railway had profoundly upset international geography. "Dare I say that it has even had a modifying influence on British insularity since the inception of the Night Ferry service which has allowed people to travel from London to Paris or Brussels without leaving their earthbound vehicle? As you know, we are now considering even better things, pressing forward with our studies for the boring of a Channel Tunnel. The realisation of this project would be the fulfilment of the hopes of railwaymen of both countries, who would thus see British and French rails linked in one of the boldest feats of civil engineering ever undertaken.

"At the present time, one of the principal features in international co-operation is the 50-cycle alternating current system of electrification, which has been given an important place by the British Transport Commission in its modernisation scheme, the wide range of which we have been admiring. Strong in my own administration's experience of this system, which was put into effect by that great engineer, Louis Armand, whose name will certainly be familiar to you, I am pleased to see a congress such as this contributing so largely to the diffusion of a technique adopted today by so many countries." The International Union of Railways represented 50 administrations, of which 18 were outside Europe, and was making every effort to meet the needs of a rapidly developing economy, said M. Dargeou, who associated U.I.C. progress with the name of Professor Oeftering, its present chairman.

### Modernisation

Lord Chandos, proposing "Railway Modernisation," said that many did not realise that the B.T.C. was responsible for the largest network of railways ever put under one administration and the size and complexity of the modernisation project was not always understood by the man-in-the-street. Road transport competition was always keener in the short-haul traffic which preponderated in Britain; modernisation had, however, been undertaken on a truly imaginative scale. While roads became congested railway passenger traffic was being revolutionised and although a confirmed motorist he travelled by train whenever he could. The attractions of long-welded rails and air-conditioning were great. We were the first country to have a national electricity grid and now the B.T.C. had adopted 50-cycle traction drawing current direct from it. The manufacturers were working in great harmony and efficiency with the B.T.C. They had already played a part in many great electrification schemes all over the world and now they were adding experience at home. This experience was all at the disposal of the world for the provision of schemes tailored to suit the needs of other countries.

He coupled the subject of railway modernisation with the name of Sir Brian Robertson, who carried a great burden; the railways were always under fire, both from destructive criticism and also from the well-meaning and constructive sort. Sir Brian could ignore the criticisms of the ignorant for railway modernisation was a monument to his foresight. He must make special mention of one member of the team—Stanley Warder, who had displayed a single-mindedness which must earn their respect.

### Record of Service

Sir Brian Robertson, chairman, British Transport Commission, said it was a great honour to have that toast proposed by a man with such a record of service behind him. Every representative of the railway was fighting a hot campaign against competition. For that it was necessary to have the right equipment. We suffered certain disadvantages compared with our friends on the Continent. The ravages of war descended on us and to some extent on our railways—but not enough to clear away some of the monuments to the dirty habits of the steam engine and to the tastes of our forebears. Rather than rebuild stations we had to pay more attention to those things which directly affected the services. Electrification was part of the business and to believe in electrification you must believe in railways. "We owe," he said, "an enormous debt to our suppliers, without whose help we could achieve nothing. Our partners in this conference are our hosts tonight. Only six years ago 99 per cent of our traction was steam and the system offered little scope to suppliers to try out or show their wares—yet today they furnish us with equipment which is doing us well and will stand comparison with anything to be seen elsewhere."

The president of the British Electrical and Allied Manufacturers' Association, Sir Leslie Gamage, expressed "Au Revoir" to the guests. In speaking the epilogue to the conference he thanked the Lord Mayor for the use of the hall, expressed gratitude to Sir Brian for the inspiration of arranging the convention, for opportunities of meeting the guests and for giving manufacturers a shop window for their wares. Good fellowship had prevailed; he thanked the B.T.C. for organisation of a memorable week and he hoped the guests, whom he thanked for coming, would take back a concept of what we were doing in our factories.

TRAIN DESCRIBERS  
TRAFFIC CONTROL SYSTEMS  
TRANSMISSION EQUIPMENT  
LOUDSPEAKER SYSTEMS  
REMOTE CONTROL SYSTEMS  
TELEPHONE SYSTEMS  
TELEGRAPH SWITCHING SYSTEMS  
COMPUTERS FOR RESEARCH,  
DESIGN AND ACCOUNTING  
RECTIFIER EQUIPMENT  
COMMUNICATION CABLES

systems  
and equipment  
for railways



Standard Telephones and Cables Limited

TELECOMMUNICATION ENGINEERS

CONNAUGHT HOUSE • 63 ALDWYCH • LONDON W.C.2



## SOCIAL AND PERSONAL

### L.T.E. Reappointments

**A**FTER consultation with the chairman of the British Transport Commission, the Minister of Transport has reappointed Messrs. A. H. Grainger, L. C. Hawkins, B. H. Harbour and Anthony Bull, O.B.E., to be full-time members of the London Transport Executive.

As previously announced, Mr. S. G. Jones, legal adviser, has been appointed secretary to the London Transport Executive with effect from October 3. He succeeds Mr. R. M. Robbins, whose appointment as chief commercial and public relations officer was recently announced. Mr. Jones entered the legal and Parliamentary office



Mr. S. G. Jones

of the Underground group of companies in 1929 and, on the formation of the London Passenger Transport Board in 1933, was transferred to the office of the solicitor to the Board. He was admitted as a solicitor in 1938. In 1947 Mr. Jones was appointed acting assistant solicitor (general) and in 1948 was made an officer of the London Transport Executive and confirmed in the appointment of assistant solicitor (general). He became solicitor to the Executive in the same year. On the formation of the British Transport Commission legal service in 1950, Mr. Jones was transferred to that service and was appointed as legal adviser to London Transport.

Air Commodore F. R. Banks has been made managing director of Blackburn Engines, Limited. He joined the Blackburn group last year from the Bristol Aeroplane Co., Limited, of which he was a director.

The Minister of Aviation, has appointed Mr. Beverley S. Shenstone, M.A.Sc., F.R.Ae.S., A.F.I.A.S., F.C.A.I., to the board of British European Airways. Mr. Shenstone has been chief engineer of B.E.A. since 1948.

Mr. R. Shervington, assistant district traffic superintendent, London (Western), Woking, Southern Region, B.R., has been appointed traffic superintendent, line traffic manager's office, South Eastern Division, vice Mr. T. R. V. Bolland.

Following the successful weekend course at New College, Oxford, in September, the Institute of Transport announces a similar course, again at New College, for the weekend September 22-25, 1961. The course will be open to all grades of members of the Institute to whom particulars, with booking forms, will be circulated in due course.

Mr. J. W. Denford, A.C.I.S., has been appointed accounts officer of London Transport with effect from September 19. He succeeds Mr. E. S. H. Eales, whose appointment as accountant was recently announced. Mr. Denford entered the chief engineer's office of the London Electric Railway in 1929. Since October, 1957, he has been principal accounts assistant.

The Franklin Institute announced this week that it will award its George R. Henderson Medal for inventions or discoveries in the field of railway engineering to two British engineers. They are Mr. Herbert Sammons, managing director of D. Napier and Son, Limited, and Mr. Ernest Chatterton, retired chief engineer, of the piston engine division of Napier. They were respectively inventor and designer and developer of the Deltic diesel engine.

### C.I.E. Management

**A**PPOINTMENTS have been announced of the five area managers of Coras Iompair Eireann under the next stage of the scheme for reorganising its system of management. With headquarters at Dublin, Cork, Galway, Limerick and Waterford they will have a large degree of autonomy in their own areas and will be assisted by a small staff dealing with accounts, operating, commercial staff and other matters in their area. The area managers are:—Dublin, Mr. C. F. Clune (manager) and Mr. K. G. Brady (deputy manager); Cork, Mr. L. Dunne; Galway, Mr. P. Murphy; Limerick, Mr. J. F. Higgins; and Waterford, Mr. W. A. O'Neill.

Mr. A. M. Hinde has been appointed Midland division manager, Power Petroleum Co., Limited.

Manager of Shannon Airport for 18 years, Colonel P. Maher, retired last week having attained the age limit.

The Institution of Civil Engineers and the Institution of Municipal Engineers have now reached a formal agreement for the amalgamation of the two bodies.

The Tarmac Group of companies has announced the appointment of Mr. W. N. Cook as a director of T.G. Construction Co., Limited. He was previously with Wilson Lovatt and Sons, Limited.

The annual convention of the Railway Students Association took place this year in Western Germany from September 26 to October 1 under the presidency of Mr. H. C. Johnson, general manager, Eastern Region, B.R. Hanover was chosen as the convention centre and visits were paid therefrom to Brunswick, Bremen, the Volkswagen works at Wolfsburg, and Goslar.

In anticipation of his forthcoming retirement, Mr. G. G. Wilson, A.M.Inst.T., has relinquished the office of hon. corresponding member to the Institute of Transport for Singapore and has been succeeded by Mr. A. Campbell, A.M.Inst.T. Mr. Campbell, assistant manager, the Singapore Traction Co., Limited, is a former hon. secretary of the Scottish section.

Mr. D. Fenton, recently appointed movement officer (traffic headquarters), Eastern Region, located at Liverpool Street, entered the service of the former L.N.E.R. as a traffic apprentice in 1935. After a period of training he had further experience in the passenger manager's and divisional general manager's offices. In 1940 he was commissioned in the Royal Artillery, being demobilised in 1946 with the rank of captain (instructor in gunnery). In the Scottish Area of the L.N.E.R. he had both commercial and operating experience before returning to the divisional general manager's office, Southern Area. He was appointed assistant district operating superintendent, Lincoln, in 1948 and in 1950 took up the corresponding position at Manchester. He became assistant district operating superintendent, Nottingham, in 1952, and district operating superintendent, Fenchurch Street (Southend district) in 1954. Mr. Fenton was appointed district operating superintendent, Hull, in February, 1955, assistant to operating superintendent (general), Eastern Region, in May, 1956, and movement superintendent (Great Eastern), in November, 1957, which post he has now vacated to take up his new appointment. Recently he undertook the leadership of the first U.K.R.A.S. team to go abroad, to Pakistan to report on the technical and financial aspects of electrification there.



Mr. D. Fenton

The 13th annual reunion luncheon of the Southern Railway Association was held at the Charing Cross Hotel on October 11, with Sir William Currie, a director and last chairman of the former Southern Railway, presiding. Sir Philip Warter, chairman of the Southern Area Board, British Transport Commission, and Mr. Charles Hopkins, general manager of the Southern Region, B.R., were the association's guests.



Directors of the Western Welsh Omnibus Co., Limited, recently made a tour of inspection of the undertaking, and here are seen with some of their officers at the company's Bridgend depot. Left to right: Messrs. F. A. Mason (chief engineer), G. S. Henman (architect), T. G. Davies (general manager), P. Yorke (director), E. G. Burgoine (area manager, Bridgend), L. Rees (clerk of works), G. Wilson (garage foreman, Bridgend), John Spencer Wills (chairman), H. E. Osborn (director), G. Alexander (secretary and accountant), W. T. James (managing director), K. W. C. Grand (director) and L. A. Smith (assistant traffic manager).

Mr. J. D. Slater, commercial director, and Mr. R. A. Fryars, chief engineer, of A.E.C., Limited, left England on October 11 for a round-the-world trip which will start in South Africa, where they are spending a week with A.E.C. Vehicles (S.A.), Limited. From South Africa Mr. Slater and Mr. Fryars will fly to Western Australia and subsequently to Sydney, where the head office of A.E.C. (Australia) Pty., Limited, is situated. Thereafter they will visit New Zealand, and then will travel on to the United States. Before finally returning to Britain they will visit the Canadian Car Co., Limited, in Montreal.

The annual general meeting of the Diesel Engineers and Users Association will be held at the Institute of Marine Engineers, Mark Lane, E.C.3, at 2.30 p.m. on Thursday, October 20. In the absence of other nominations the general committee has nominated Mr. W. A. Parker as president, Mr. Julian S. Tritton as hon. secretary and Mr. Dodsley Williams as hon. treasurer. Messrs. H. R. Guest and A. G. Howe have been nominated for the general committee. In recognition of long and valuable service to the association, Mr. W. Howes (elected member 1920, president 1948-49) is recommended for election to hon. membership.

## Daily door-to-door express container services in especially-designed container-ships to and from NORTHERN IRELAND



- All parts of Northern Ireland, Scotland and England served
- Greatly Minimised Risk of Loss by Theft or Damage
- Free Insurance (General Merchandise)—£800 per ton
- Closed Security-Locked Containers
- Insulated Containers for Perishable Foodstuffs—for Hygiene and Cleanliness
- Open Containers and "Flats" for Unpacked Machinery etc.
- All Goods Conveyed with Minimum Packing

Door-to-door inclusive rates

## ANGLO-CONTINENTAL CONTAINER SERVICES

(London) Ltd and (Belfast) Ltd

LONDON 79 Dunton Road SE 1 Bermondsey 4881/4 (Head Office) and Elland Road SE 15 New Cross 4885/7 (Traffic Depot) PRESTON The Docks Preston 86742/4 LARNE (Northern Ireland) Bay Road Larne 2331/2 BELFAST 35/39 Middlepath Street Belfast 59261/5 MANCHESTER 2 270/1 Royal Exchange Buildings Blackfriars 9287/9 GLASGOW 10 Bothwell Street c2 City 6997/8 (Offices) and 17/21 Tylefield Street SE BRIDGETON 2277/8 (Traffic Depot) ARDROSSAN (Ayrshire) Harbour Street Saltcoats 1911/2 BRISTOL 61 Park Street Bristol 25435/6

## PICKFORDS HEAVY HAULAGE SERVICE

Abnormal Loads • Lifting

MOBILE CRANES FOR HIRE • Branches in all large towns



Harts Lane, North Street, Barking, Essex  
Tel: Rippleway 0366 (4 lines)

Manchester Depot:  
231 Greengate, Middleton Junction, Middleton,  
Manchester. Tel: Fallsworth 3353 and 2242

for the  
TRANSPORT  
of  
**BULK LIQUIDS  
POWDERS  
GASES**

## SILVER ROADWAYS LTD.

Reliable Trunk Services to all Parts

<b>BRISTOL</b> 8 The Grove, Bristol 1 BRISTOL 22315	<b>LONDON</b> 22-24 Bermondsey Wall West. S.E.16 BERmondsey 4533	<b>GLASGOW</b> 12 Dixon Street, C.2 CITY 3381
<b>BIRMINGHAM</b> 323 High St., West Bromwich, Staffs. WEST BROMWICH 2801	<b>CARDIFF</b> 10 Dumfries Place CARDIFF 21631	<b>LIVERPOOL</b> 11 Old Hall Street, Liverpool, 3 CENTRAL 6386
<b>LLANELLY</b> Morfa Works, Llanelly LLANELLY 4302	<b>SWANSEA</b> Exchange Buildings SWANSEA 541710	<b>NOTTINGHAM</b> Pavilion Building, Pavilion Road, West Bridgford NOTTINGHAM 83481



## IMPORTANT CONTRACTS

## Demand for Articulated Vehicles

ANNOUNCING the receipt of over £1 million worth of orders during the Commercial Motor Show, Scammell Lorries, Limited, of Watford, also report a considerable increase in the interest that is being shown by transport operators in matched articulated vehicles. Commenting on this interest, Mr. Donald G. Stokes, Scammell's newly-appointed managing director, stated: "It is evident from discussions with operators and from inquiries made at the show that there is an increasing awareness of the advantages of interchangeability and flexibility of operation from the use of articulated vehicles. Scammell light and heavy vehicles are also finding favour on the Continent, especially in Germany." Orders were taken from home and overseas sources for approximately 200 semi-trailers of all types, customers including Reed Transport, Limited, Reed Corrugated Cases, Limited, Midland Counties Dairies, Limited, C. and G. Norman, Limited, and Wincanton Transport, Limited, in Britain, and operators in Ireland, Pakistan, South Africa and Borneo. Continued interest was shown in the well-tried Highwayman motive unit and its matched specialised types of semi-trailers and also in the Scarab Mechanical Horse for which repeat orders were placed by the Corporation of London and Battersea Borough Council.

## Sabena Orders More Caravelles

Sabena, the Belgian airline, has ordered two more Sud-Aviation Caravelle 6s raising from four to six the number of this type which it has on order. Delivery of the first four is now expected in January and the other two should follow next June.

## Britax Belts for Police

Britax (London), Limited, has just completed an order for Britax safety belts, required to equip all patrol cars operated by the West Riding of Yorkshire Constabulary. The belts supplied, of the single diagonal type, were selected after exhaustive tests.

## Buses for Bolton

Bolton Corporation has accepted tenders from Leyland Motors, Limited, for 17 30-ft. double-deck bus chassis with semi-automatic gearbox and from East Lancashire Coach Builders, Limited, for nine and Metropolitan-Cammell-Weymann, Limited, for eight 30-ft. double-deck front-entrance type bus bodies with heaters and power operated doors.

## French Shipyard Gets Israeli Contract

A French shipyard is to build a 22,000-d.w. ton liner for the Israeli Shipping Company, according to shipbuilding quarters in Paris. The liner will be constructed by the Chantiers de l'Atlantique shipyard in Saint Nazaire. It is understood that the financial provisions in the contract include the granting of a credit to Israel by France.

## Brons Diesels to be Built in England

The Netherlands company, Appingedammer Bronsmotorenfabriek, manufacturer of the well-known Brons marine and stationary diesel engines of from 100 to 1,200 h.p., reports that Brons engines will be built under licence by the Drypool

Engineering and Dry Dock Co., Limited, Hull. The engines will be marketed under the name of Drypool Brons. The first two types to be produced at Hull are the 600-h.p. V-8 and the 900-h.p. V-12 units, with the larger types to follow later. The English licensee has already booked several orders for Drypool Brons engines.

## Spain Buys British I.H. Tractor Components

Following the conclusion of an agreement entered into earlier this year between International Harvester Co., of Great Britain, Limited, and S.A. de Construcciones Agrícolas de Seville, an initial 1,000 sets of I.H. tractor components are shortly being shipped to Spain. There, with the addition of further parts supplied from local sources, they will be assembled into special versions of McCormick International B275 agricultural tractors.

## South Wales Docks Contracts

Recent contracts placed by the British Transport Commission (South Wales Docks) include the following:

Andrew Scott (Civil Engineers), Limited, for reconstruction of crane track and associated works at No. 4 Quay, Swansea Docks. Associated Electrical Industries, Limited, for switchgear for sub-station at No. 4 Quay, Swansea Docks. Industrial Engineering, Limited, for resheeting roof and repairs to walls of F shed, King's Dock, Swansea. D. T. Edwards and Co., Limited, for resheeting sides and ends of G shed, Prince of Wales Dock, Swansea. Stothert and Pitt, Limited, for electric capstans at north side, Queen Alexandra Dock, Cardiff. Penarth Pontoon Slipway and Shiprepairing Co., Limited, for repairs to dredger Taff.

## India Pipeline Project Order

A contract for welding supervision services over approximately 800 miles of pipeline has been placed with Solus-Schall, Limited, Stanmore, by Burma Oil Co. (Pipelines), Limited, on behalf of Oil India. The work involved is estimated to be worth about £250,000. The pipeline will run from Barauni to Nahorkatiya across the top of East Pakistan, generally following the line of the Brahmaputra river. A £1 million contract to supply telecommunication systems to the project was recently placed with the electronics division of Murphy Radio, Limited, the parent company of Solus-Schall.

## British Hydrocarbon Chemicals in South Wales

British Hydrocarbon Chemicals, Limited, is developing plans for a major extension of its manufacturing activities at a new location in South Wales. For nearly 10 years the company has been actively engaged in the petrochemicals industry at Grangemouth, receiving its supplies of feedstocks mainly from the adjacent British Petroleum refinery. The range and scope of production has increased more than five-fold since the original operation started and expansion continues. The proposed new site, of several hundred acres, will be within a short distance of the B.P. refinery at Llandarcy, near Swansea, and the general pattern of operations can be expected to follow that at Grangemouth. British Hydrocarbon Chemicals is jointly owned by the British Petroleum Co., Limited, and the Distillers Co., Limited.

## SHIPPING AND SHIPBUILDING

## Replacement of "Queen Mary"

IT was announced on Tuesday that the Government, which has been considering the report of the committee presided over by Lord Chandos on the replacement of the Cunard liners *Queen Mary* and *Queen Elizabeth*, has decided to give assistance towards the replacement of *Queen Mary* by a new ship such as the committee recommended of some 75,000 gross tons. Discussions have taken place with the Cunard company and provisional agreement has now been reached on the extent and terms of assistance which the Government will give. The extent of Government assistance will be similar to that suggested by the Chandos Committee, but its form and conditions will be different in certain respects. Parliament will be informed of the detailed arrangements when it reassembles. Meanwhile the Cunard company is drawing up an invitation to tender so that it may be sent out to all appropriate shipyards in the country as soon as practicable. The committee considered that, of a total cost of some £30 million, the steamship company should provide £12 million.

## Famous Liner for Sale

THE 20,400-ton *Empress of France* has been placed in brokers' hands and will be withdrawn from the Canadian Pacific's Atlantic service at the end of her last voyage from Montreal to Liverpool on November 30, where she is due on December 6. The entry into service in April, 1961, of the new £8 million *Empress of Canada* (27,300 tons) now building at Vickers-Armstrongs Naval Yard, Walker on Tyne, will make the *Empress of France* redundant to the company's normal requirements.

## Government and Shipping

SPEAKING at the Chamber of Shipping dinner in London on October 6, the President of the Board of Trade, Mr. Reginald Maudling, said that the Government would claim that in recent years the investment allowance had gone a long way to eliminate the advantage previously enjoyed by flags of convenience. Of course, it was not a complete answer to all problems. It was admittedly of less assistance to the smaller owners and, in their case particularly, there were problems of the availability of finance still to be solved. But there was evidence to show that the investment allowance was producing really substantial results. The more serious danger, to his mind, was that of what was broadly called flag discrimination. The general extension of discriminatory practices, either by subsidies or cargo preference, was contrary to the interest of the shipping nations and, he believed, to the interest of the commerce of the free world as a whole. It would be of great benefit if our American friends could co-operate with us in this matter and see whether we could not expand in the shipping field those principles of competitive unrestricted international trade which both our countries sought to apply in international trade generally. There was an analogy between flag discrimination and such matters as export subsidies and tax incentives to exporters. In these two latter fields, which were more familiar to the Board of Trade than the ship-

ping problem, it had had always to choose between trying to achieve non-aggression agreements or entering into a competition. It had always felt that it is better for us to try and achieve general international agreement. "We cannot, of course, allow our traders to be placed in a wholly unfair competitive position: on the other hand, we must be careful of entering into a competition in such artificial aids to trade, which, though in the short run they appear attractive, in the long run may lead to a general breakdown in the system of free international exchange which is of benefit to this country."

## Shipping and Invisible Exports

AN inquiry into the contribution of United Kingdom shipping to the country's invisible exports in 1959 has been carried out by the General Council of British Shipping and the results submitted to the Government. It shows that the industry's estimated contribution to the balance of trade was £100 million, compared with £135 million for 1958 and £221 million for 1952. This is the first sample inquiry of its kind conducted by the industry and was undertaken at the Government's request to supplement the periodic full-scale inquiries which take place at approximately five-yearly intervals. The fall in the invisible exports contribution is accounted for partly by an increase in the industry's foreign disbursements and partly by the fact that, although gross earnings in the foreign trade came to about the same amount in each year, freights earned on United Kingdom imports were rather higher in 1959 than in 1958 and freights earned on United Kingdom exports and in the cross-trades were rather lower. The import freights, although representing a saving to the country of freights which would otherwise have to be paid to foreign ships, do not represent a direct contribution to invisible exports. There seems no doubt that the increasing effect of flag discrimination is one of the factors accounting for the decline in invisible export earnings.

## FINANCIAL RESULTS

NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganisations.

## B.E.T. Omnibus Services

In order to bring the issued share capital of B.E.T. Omnibus Services, Limited, into closer relationship with the capital employed in the business the directors are recommending that £1,500,000 of the company's reserves be capitalised and applied in paying up in full 1,500,000 ordinary shares of £1 each to be distributed to ordinary stockholders in proportion to their existing holdings of ordinary stock. The shares will, upon issue, be converted into ordinary stock and will rank for dividend and in all other respects *pari passu* with the existing stock. Ordinary stockholders will receive one new 10s. ordinary stock unit for every two 10s. units of ordinary stock held on the qualifying date.

## Ford Motor

An interim dividend of 6½ per cent (5 per cent) on its ordinary shares for the year ending December 31, 1960, has been announced by the Ford Motor Co., Limited. Trading profit for the first half of 1960 amounted to £20,989,658, compared with £17,385,505 for the same period in 1959, and the group net profit was £11,882,606 (£9,979,382).

It's "cead míle fáilte" to Austin in Dublin's fair city



WHEN they raise their glasses in Ireland's select bars, like as not it'll be a Phoenix ale they're drinking. And it's a "hundred thousand welcomes" to the Austin that brings it.

Phoenix was a new drink in 1956. In 1958 it won first prize against all comers at the Brussels World Fair. Last year 15,000,000 pints were downed in Eire alone and exports to America rose by 200%.

Phoenix is brewed at Waterford by an Associate Company of Arthur Guinness, Son & Co. (Dublin) Ltd. Austins carry it in huge transportable tanks the hundred miles to the distributing centre, Cherry's

Brewery, Dublin. Here it is bottled or casked and taken all over Ireland by Austins. There are all-day local deliveries too, at Dublin's 700-odd bars.

Concentrated effort. The 12 Austins in the Phoenix fleet include 3, 5 and 7 tonners. Of them Mr. D. B. Keogh, Manager, says, "75 per cent of the lorries' effort is concentrated into June, July and August. We need vehicles that will keep going. In the summer they clock up averages of 1,000 miles a week. Our 7 tonner has covered 180,000 miles since May '55 and many of our Austins have done over 100,000 miles without any major repair at all."



Rush hour in O'Connell Street. Ned Buckley at the Austin's wheel. His job—daily deliveries in Dublin. How does the 3 tonner stand up to it? "Never even had a puncture," he says. "A poor man wouldn't get this lorry. He wouldn't be so lucky, see!"



Up from Waterford with 540 gallons in each 18 cwt. tank. John Fleming of Co. Wexford, 25 years a driver, says of his 5 ton Austin: "You couldn't ask for better than B.M.C. Austin. I go all over Ireland in mine, go up hills without a change. I've had no trouble at all, even with 8 or 9 ton loads and trailer. It's the best I've had yet in any make for comfort, turning, steering, everything. A big load feels like no load at all."

All vehicles in the 1-7 ton Austin range are warranted for 12 months and backed by B.M.C. Service. Lincoln & Nolan Ltd., Dublin, supply Austins for the Phoenix fleet.

**AUSTIN**

THE AUSTIN MOTOR COMPANY LIMITED · LONGBRIDGE · BIRMINGHAM

